



**30
MEGA
GAMES**

**COMMODORE 64/128
ENGLISH**

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ALIENS

THE COMPUTER GAME

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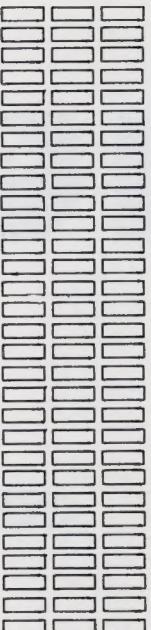
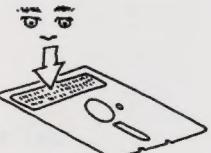
ACE 2088
 ALIENS
 BIG TROUBLE IN LITTLE CHINA
 CHAMPIONSHIP BASEBALL
 CHAMPIONSHIP BASKETBALL
 CHAMPIONSHIP FOOTBALL
 CORPORATION
 DANDY
 ENDURO RACER
 EXPLORER
 FIRETRAP
 GEE BEE AIR RALLY
 GALACTIC GAMES
 GHOSTBUSTERS
 GUADALCANAL
 HACKER
 HIGH FRONTIER
 INCREDIBLE SHRINKING SPHERE
 KARNOV
 KNIGHTMARE
 MERMAID MADNESS
 PARK PATROL
 PRODIGY
 RAMPAGE
 REAL GHOSTBUSTERS
 SPIN DIZZY
 STAR RAIDERS 2
 SUPER HANG ON
 SUPERSPRINT
 WONDERBOY

LOADING INSTRUCTIONS

COMMODORE 64 CASSETTE:-

Press 'Shift' and 'RUN/STOP' keys simultaneously and press 'PLAY' on your cassette recorder.

COMMODORE 64 - Diskette



The crew have set-up the Mobile Tactical Operations Bay (MTOB) in the Armoured Personnel Carrier, just outside the colony base. You will remain here and direct the other crew members around the base using the MTOB to monitor their progress. Technical specs. of the MTOB follow:

1. **Video Screen.** Receives signal from portable video camera strapped to the helmet of the selected crew member. Display may be moved left or right by moving Smart Gun sights. Enables you to see in real time what the selected crew member is experiencing.
2. **Smart Gun Sights.** May be moved left, right, up or down. Each crew member has 1 Smart Gun, which is a computer aimed, video targeted automatic weapon. Ideal for blasting any bio-mechanical growth, locks, doors or other objects you may encounter as you explore the base. Use Smart Gun cautiously, as each crew member only carries a limited amount of ammunition for their Smart Gun.
3. **Selected Crew Member Portrait.** The name of the selected crew member is displayed above their portrait.
4. **Bio-Functions Trace.** Mechanism that plots the critical health status of the selected crew member – including heart rate, breathing etc.
5. **Ammunition Level.** The amount of ammunition being carried by the selected crew member. This may be automatically tapped up by entering the Armoury room.
6. **Personnel I.D.** Name of a crew member that you may select.
7. **Room Number.** The location within the base of this crew member. If there is no number, the crew member is dead and has become an Alien!

Spectrum users can now select the control method they require – keyboard or joystick – by pressing the C key, and selecting accordingly.

Amstrad users can play by either keyboard or joystick at any time during the game.

COMMANDING THE CREW MEMBERS:

Selecting a Crew Member

RIPLEY	R
GORMAN	G
HICKS	H
BISHOP	I
VASQUEZ	V
BURKE	B

Directing

The selected crew member can be told to move up to 9 rooms at once in a given direction. To do this, type any number from 1 to 9, then immediately type a direction – key N (North), S (South), E (East), W (West). Now select a different crew member. This member will now move as instructed. Note that if the crew member reaches a dead end, a locked door, acid blood or gets exhausted then they will stop.

STARTING THE MISSION:

Firstly, you will need to activate the MTOB. (Spectrum users press the O key, Amstrad users press the SHIFT key).

When the MTOB is activated, you will see that the crew members have already blasted their way into the base, at room

1. If you direct the crew members outside the base from now on, they will be unable to breathe, so it's not a good idea!

You may also move a crew member through rooms by aiming the Smart Gun Sights over the door, then pressing the SPACE BAR.

Smart Gun control

Control the Smart Gun as follows:

Action	Spectrum Key
--------	-----------------

Gun UP	: Cursor UP (7)
Gun DOWN	: Cursor DOWN (6)
Gun LEFT	: Cursor LEFT (5)
Gun RIGHT	: Cursor RIGHT (8)
FIRE Gun	: 0 (number key)

Amstrad CPC	Joystick
Key	

UP Arrow	: Push Forward
DOWN Arrow	: Pull Back
LEFT Arrow	: Push Left
RIGHT Arrow	: Push Right
SHIFT	: Fire Button

Pause Game

To pause the game at any time, press the *P* key. Blast shutters will now cover the Video Screen of the MTOB. The total number of Aliens you have destroyed will be displayed now, together with the Alien Attack Wave number. To restart the game, press the *P* key twice.

Suicide Key/Restart Game

If the pressure gets to much, press *M* key.

STARTING THE MISSION:

COMMODORE 64

Firstly, you will need to activate the MTOB. Press the FIRE BUTTON on your joystick.



WONDER BOY

CONTROLS Commodore 64

F1	- ONE PLAYER GAME
F3	- TWO PLAYER GAME
F5	- TOGGLE MUSIC ON/OFF
F7	- PAUSE
Z	- LEFT

X	- RIGHT
=	- JUMP
SPACE	- RUN FASTER/JUMP HIGHER/THROW AXE

CONTROLS Spectrum

1	- ONE PLAYER GAME
2	- TWO PLAYER GAME
ENTER	- PAUSE
0	- LEFT
P	- RIGHT
Q	- JUMP

Any key on the bottom row of keyboard - run faster/jump higher/throw axe.

SYMBOL SHIFT and BREAK - Reset the game.

The program automatically scans for Sinclair and Kempston joysticks.

CONTROLS AMSTRAD/SCHNEIDER

Action:

1 PLAYER GAME

2 PLAYER GAME

PAUSE GAME

MUSIC ON/OFF

JUMP

RUN RIGHT

RUN LEFT

THROW STONE/AXE

RUN FASTER

HIGH JUMP

Keyboard:

I

2

ESC

DEL

Q or]

[or X

@ or Z

SPACE BAR or SHIFT

SPACE BAR or SHIFT

SPACE BAR or SHIFT

Joystick:

JOYSTICK UP

JOYSTICK RIGHT

JOYSTICK LEFT

JOYSTICK BUTTON

JOYSTICK BUTTON

JOYSTICK BUTTON

JOYSTICK

UP

RIGHT

LEFT

BUTTON

BUTTON

BUTTON

BUTTON



CONTROLS

COMMODORE 64

The game uses either joystick or keyboard for fighter sphere control, the joystick plugs into port 2 (rear port) the direction of the joystick movement can be selected as normal North or Isometric North according to preference. (See below).

KEYBOARD

PAUSE RUN/STOP (Move joystick or hit keys to restart)

QUIT RUN/STOP when press "Q"

F1/F7 Change Joystick Directional Control
(Arrow on title screen shows Joystick NORTH)

As an alternative to the Joystick the following keys may be used:

FIRE RETURN (Also used for placing ammo dumps)

NORTH ;

SOUTH /

WEST X

EAST C

The SPACE BAR is used to EXIT from the PLACE AMMO DUMPS screen.

SPECTRUM/AMSTRAD CPC

The game uses either joystick or keyboard for fighter sphere control, the joystick on the Spectrum can be either Sinclair 1 or Kempston. (See below).

KEYBOARD

On Title Screen press SPACE BAR to START.

Joystick Selected with "I" = SINCLAIR (Spectrum Only)
"K" = KEMPSTON (Spectrum Only)

PAUSE P
QUIT Q (When the game is already paused)

FIRE ENTER/RETURN (Also used to place ammo dumps)

NORTH K

SOUTH M

WEST Z

EAST X

SPACE BAR used to go through the plates for ammo dump placement and the "S" Key is used to start the game.

ATARI ST AND AMIGA

JOYSTICK AND TV OR COLOUR MONITOR REQUIRED.

The game uses JOYSTICK ONLY for fighter sphere control, the joystick plugs into port 2. The direction of the joystick movement can be selected as normal North or Isometric North according to preference. This option is only given on first loading of the game.

KEYBOARD

PAUSE F10 (Toggle pause on Atari ST)

UNPAUSE F9 (Amiga only)

QUIT Escape Key

SPACE BAR Exit Ammo Dump Placement Screen

HOW TO PLAY – NO FRILLS!

For those who don't like reading long instructions before playing!

PLACING AMMUNITION DUMPS

At the beginning of the game, or on reaching a new level, the player has the option of placing ammo dumps almost anywhere within the current level.

There are four PLATE maps to each level, you can install up to 4 ammunition dumps on EMPTY tiles throughout the level.

1. Move Joystick UP/DOWN to CHOOSE PLATE and press FIRE or use the keyboard as mentioned.
2. A cursor appears over the mini map for that PLATE. Move cursor to required position over an unoccupied tile and press FIRE to place AMMO DUMPS. The letter "A" will appear on the map if you have chosen an allowable tile. (Amiga and ST has the option of deleting a dump by pressing fire over a placed dump).
3. Place cursor on any SIDE EDGE of the PLATE MAP and press FIRE to return to the CHOOSE PLATE option.
4. PRESS SPACE to EXIT into DEATH RUN at any time.



GHOSTBUSTERS FRANCHISE

To begin your Ghostbusters franchise, you will need to go through a series of screens selecting the equipment for the franchise. When you leave the title screen by pressing **F1** or **F3**, you will enter the first franchise selection screen. The computer will print out a message in English; when it first stops, you should enter your name, last name first, and press **RETURN**. The computer will then ask you in English if you have an account.

If you have an account:

Enter the letter **Y** and press **RETURN**. At this point the computer will ask you what your account number is, and you should enter that number. The computer will then go on to the vehicle selection screen, and the amount you have in your account will be displayed in white numbers on the screen.

If you do not have an account:

Enter the letter **N** and press **RETURN**. At this point the computer gives you \$10,000 as a startup account, and you proceed to the vehicle selection screen.

GHOSTBUSTING VEHICLE SELECTION

You now are presented with the option of four different vehicles to use during the game. You may either view any of the cars by pressing the space bar on your CGA, pressing the number of the car you wish to view, and pressing **RETURN**; or you may purchase any of the cars simply by pressing the number of the car you choose, and pressing **RETURN**.

The four cars which are available are as follows:

1. The compact, with a cost of \$2,000, carries 5 items of cargo and has a top speed of 75 miles per hour.
2. The 1963 hearse costs \$4,800, carries 9 items of cargo, and has a top speed of 90 miles per hour.
3. The station wagon costs \$6,000, carries 11 items of cargo, and has a top speed of 110 miles per hour.
4. The high performance car costs \$15,000, carries 7 items of cargo, and has a top speed of 150 miles per hour.

When you have decided which car you want, and have purchased it, you will move on to the equipment selection screens.

EQUIPMENT SELECTION SCREENS

Screen 1: Monitoring Equipment

In this screen, you can purchase the PK energy defector, image intensifier, and marshmallow sensor. The amount of money you have remaining, after purchasing your car, is displayed in the upper right corner of the screen in white numbers. Each of the items on this screen has a cost displayed in the right-hand column, as you purchase items, the cost of these items will be deducted from the amount of money you had remaining.

Use the joystick to control the forklift and place the items you want in your car. To move on to the next equipment screen, type the number **2**.

Screen 2: Capture Equipment

The items which can be purchased from this screen are Ghost bait, Traps, and the Ghost vacuum. Note that traps are required, so you must purchase at least one trap. The procedure for purchasing items from this screen is the same as for the monitoring equipment screen. To move on to the final equipment screen, type the number **3**, and press **RETURN**.

Screen 3: Storage Equipment

On this screen you can purchase the portable laser confinement system at a cost of \$8,000 (be sure you have enough cash remaining in order to buy it!) The procedure for purchasing items from this screen is the same as for the monitoring equipment screen. Type **E** and you will go to the city map portion of the game.

BUILDING A FRANCHISE

Follow instructions on the screen to buy and outfit your vehicle, to pick up and release supplies with the forklift, press the joystick button. Keep an eye on credit available (upper right corner).

- **PK ENERGY DEFECTOR** warns of an approaching ghost, called a "Slimer," by turning a building pink when you pass it.

- **IMAGE INTENSIFIER** makes Slimers easier to see when you are trying to catch them.
- **MARSHMALLOW SENSOR** warns you of the impending approach of the dreaded Marshmallow Man by turning a building white when you're by it

• **GHOST VACUUM** sucks up itinerant ghouls (called "Roamers") as you travel the streets of the city.

• **GHOST TRAPS** are what you use to catch and store Slimers. Each trap holds one Slimer. Without them, you cannot earn money.

• **GHOST BAIT** attracts Roamers, which periodically gather to torment the Marshmallow Man. Without **BAIT**, you cannot stop him. (See **IMPORTANT SAFETY TIPS**, below.) You get five dollars of bait when purchased.

• **PORTABLE LASER CONFINEMENT SYSTEM** stores ten Slimers in your vehicle. Saves travel time back to GHO for more traps.

MAP SCREEN

A map of the city appears, with Zuul's horrible temple in the center and GHO at the bottom. Red flashing buildings indicate the presence of a Slimer.

- Guide your vehicle to red flashing buildings, leaving as short a trail as possible to reach building. As you do this, freeze any Roamers that are moving to Zuul by touching them.

- To position yourself directly above the street, push the button. To position yourself at buildings below the street, pull back joystick and push the button.

THE STREETS

Steer the vehicle at passing Roamers (if you have frozen any) and push the button to vacuum them up. This keeps them from getting to the Temple of Zuul. The city's PK energy reading jumps 100 for each Roamer that gets to Zuul.

BUSTING GHOSTS

When you arrive at the site of the disturbance, take the following steps with the joystick.

- Direct the first Ghostbuster toward the center of the building and push the button to deposit the trap. Then move him to the far left of the screen, turn him towards the trap, and push the button again.

- The second Ghostbuster appears. Direct him to the far right of the screen, turn him towards the trap, and push the button. Both Ghostbusters will power on their negative ionizer backpacks.

- Move your Ghostbuster's inward to trap the Slimer between the streams. But do not—repeat. **DO NOT** cross the streams.

- When you have the Slimer over the trap, push the button. The trap will pull him in. (Be precise. If you miss, you know what will happen.)

The amount earned depends on how quickly you respond. Your accumulated credit is shown on the screen at all times.

IMPORTANT SAFETY TIPS

- Hit the **SPACE BAR** during the game for a status report.
- Every escaped Slimer adds 300 to the city's PK energy level.
- Beware that monolith of marshmallow monstrosity. When a **MARSHMALLOW ALERT** flashes at the bottom of the screen, the Roamers will quickly run to lorm him. You must immediately hit the "B" key on the keyboard to drop a dollop of bait before he stomps any buildings.

END OF GAME: THE TEMPLE OF ZUUL

The game ends one of three ways.

1. The Gatekeeper and Keymaster join forces at the Temple of Zuul and you have **not** earned more money than you originally started with.
2. Once the Gatekeeper and Keymaster have joined forces at Zuul, and you **do** have sufficient credit, you are able to sneak two of your three Ghostbusters into the entrance of Zuul.
3. You successfully reach the top of the Temple of Zuul by sneaking two Ghostbusters into its entrance.

Spindizzy

INSTRUCTIONS

CONTROLS

Use the joystick to control GERALD; pressing the fire button gives extra speed.

Alternatively, use the numeric keyboard:

F1 F2 F3 F4 F5 F6 F7 F8 F9

Use the SHIFT KEY for extra speed.

Pressing the SPACE BAR will stop your craft on any frictional surface.

MAP

Press "M" to display the map. Unexplored areas are marked in red. Visited areas in yellow. Any area where a jewel was seen but not collected is marked with a blue "J".

Press "ESC" to return to the game.

SCORE

Press "S" to display your current score at any time during the game.

VIEWPOINT

The cursor arrow keys will alter your viewpoint. The compass in the lower right hand corner of the screen points North at all times to help with orientation.

ABORT MISSION

Hold the SPACE BAR down until your time runs out.

COLOUR

Press "C" to toggle between colour and monochrome display mode.

PAUSE

Press "P" to pause the game. Whilst paused the border will flash. Any other key will restart the game.

EYE STRAIN

Press "I" to alter GERALD'S shape.

CREDITS

Pressing "ESC" from the title page will display the credit message.

STATUS DISPLAY

On the left, hand side of the screen, the time left to play, the areas left to visit and the number of jewels collected are displayed.

The box at the bottom shows you which switches are activated.

HINTS

Due east of the starting screen is a beginners section. In this area are simple demonstrations of some playing techniques. Time will run slowly in this section allowing you time to experiment.

Some screens will give a clue as to a switch to activate. This will cause some features to appear or disappear. Occasionally two switches may need to be used together. The clue appears in the bottom left hand corner of the screen.

Life may be used but may need to be switched on. Ice is slippery and trampolines are bouncy! Make a map; it will help you to find short-cuts (there are quite a few).

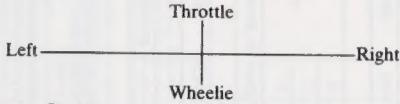


CONTROLS: COMMODORE 64

KEY	EFFECT
A	Increase Throttle
Z	Pull a Wheelie
,	Turn Left
.	Turn Right
Space Key	Apply Brakes

H Run/Stop	Pause Game
R F7	Reset Game

If you are using a Joystick then the controls are:

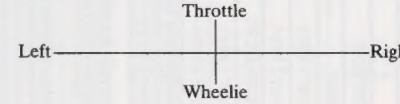


CONTROLS: AMSTRAD/SCHNEIDER SPECTRUM

KEY	EFFECT
Q	Increase Throttle
A	Pull a Wheelie
O	Turn Left
P	Turn Right
Space Key	Apply Brakes

H	Pause Game
R	Reset Game

If you are using a Joystick then the controls are:



GAME DETAILS

Up to three people can play, each controlling a different monster. In a desperate battle for survival, you climb the skyscrapers and smash the walls with your fists, searching for edibles - anything from goldfish bowls to the occasional tasty human - that appear behind the shattered windows. Grabbing inedibles such as toasters, TVs, and potted cacti will inflict some damage on you, though. Each player's stamina is indicated by the energy bars at the top of the screen.

Damaged buildings will eventually collapse into rubble, but leap off when the foundations start to give way - getting trapped in the falling masonry will weaken you. The nation's military might is also bent on your destruction, so try to avoid (or punch) the troops who fire on the windows, and the gunship helicopters that are constantly circling overhead. You can also punch - and be punched by - your fellow monsters.

GAME CONTROLS

Players with joysticks use the four stick directions and the fire button to control their monster. See the table below for the keyboard equivalents. LEFT and RIGHT cause the monster to walk along the street, or across the top of buildings. UP and DOWN are used to climb up and down the sides of buildings. Pressing FIRE on its own makes the monster jump. Pressing FIRE while pressing a direction key, then FIRE, throws a punch or makes a grab in the chosen direction. All versions are designed for three players.

Commodore Users: One on keyboard, two on joysticks.

Spectrum Users: Any combination of keyboard and/or joystick.

Amstrad Users: One on joystick, two on keyboards.

LEFT RIGHT UP DOWN FIRE

COMMODORE 64/128

1 PLAYER	<	?	@	:	=
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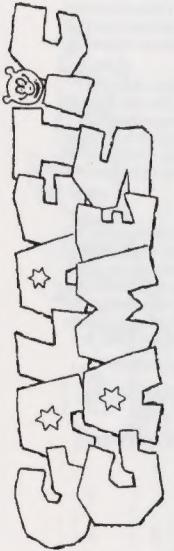
SPECTRUM

PLAYER 1	Q	W	O	K	P
PLAYER 2	DEFINABLE	DEFINABLE			
PLAYER 3					

AMSTRAD

1 PLAYER	C	V	A	Z	
2 PLAYER	↑	→	↑	↓	COPY SMALL ENTER KEY

(These are the CURSOR KEYS)



OPTIONS

EVENT SELECTION

When the preliminary program has loaded, players leave the title screen and open the Games by pressing any key. The opening ceremony involves the lighting of the Galactic Games Flame by a plasma bomb, fired by warp cruiser to the host planet from the legendary site of the first games.

Cassette games "is a multi-load program - there are five different events, and an option of entering the Galactic Games Championship" in which the player enters all events.

Cassette users should first reset their tape counters to zero at the start of the cassette, then play the five events in order, noting down the counter readings at the start of each program segment in the boxes provided below. On subsequent occasions you will be able to rewind or fast-forward to any required event.

TAPE START	0000
100m SLITHER	
SPACE HOCKEY	
PSYCHIC JUDO	
HEAD THROWING	
METAMORPH MARATHON	

Disk users will be prompted if it is necessary to turn the disk over.

NUMBER OF PLAYERS

Events 1-4 can be played either head-to-head against another player, or against a computer-controlled opponent. Event 5 is a one-player game.

In games 1-3, the computer takes control if it detects that the same FIRE control has been pressed in response to both "PLAYER READY" questions. For keyboard equivalents and the key used for QUIT, consult the tables below.

GAME CONTROLS

Throughout the instructions, the controls are referred to as UP DOWN LEFT RIGHT FIRE and QUIT For joysticks, the first five controls are self-explanatory. For keyboard equivalents and the key used for QUIT, consult the tables below.

IN GAME 4, THE COMPUTER TAKES CONTROL IF, WHEN PLAYER 2 IS ASKED TO PRESS FIRE, YOU DO NOTHING

N.B. Space/Fire to select 1st Player on Amstrad CPC

JOYSTICK					
Player 1 Keys:	J	/	X	Z	SPACE
Player 2 Keys:	;	:	K	H	1
COMMODORE 64/128					RUN STOP
Player 2 Keys	(r)				

QUITTING AN EVENT

Players may end an event at any time by pressing the QUIT key. An on-screen prompt then offers the choice of continuing with a new game in the current event, or returning to the event selection menu.

1. 100M SLITHER

Players control specially-bred racing worms, which move by bunching up the central body and then sliding forward (similar to the motion of caterpillars). A single movement cycle begins by pressing DOWN which locks the head and bunches the body, drawing the tail forward. Pressing UP now extends the worm so flat, and causes the worm to slide forward. Repeating this action at speed drives the worm forward along the track, although for maximum speed you must find the right rhythm for the UP and DOWN strokes. Press DOWN and then RIGHT for a "super-sprint".

To lubricate your path along the ground, the worm exudes slime at a rate, so if your opponent gets his attack first, the slime gland runs dry, the worm will start to overheat. Unless the player slows down to allow the gland to recharge, the excessive fiction will eventually make the worm burst into flames. The slime level and temperature of the two worms are displayed on meters at the top of the screen.

2. SPACE HOCKEY

Player controls are simply by means of the UP, DOWN, LEFT and RIGHT controls, with FIRE acting as a brake. The brake is essential for players to retain control because, being spheres themselves, the players will rebound from the puck, and each other. On impact.

3. PSYCHIC JUDO

The left-hand window of the split-screen shows Player 1's view of Player 2, while the right-hand window shows Player 2's view of Player 1. The two players, whose over-developed brains are located in their stomachs, belch bolts of psychic energy at each other and defend themselves with mental shields.

To attack, press FIRE to transfer psychic energy from your reserve energy bar to your bolt launcher bar. When the bolt is at the required strength, release FIRE to launch the bolt. You will see it travel from you and towards your opponent. Steer the bolt using LEFT, RIGHT, UP and DOWN, trying to shield your opponent may have erected!

There can only be one psychic bolt travelling at a time, so if your opponent gets his attack first, you are forced into defensive mode. Here, you control the erection of mental shields in front of selected areas of your body in an attempt to catch the on-coming bolt. The larger the shield and the longer you hold it, the more energy is drained from your reserves; however, if you catch the bolt a portion of its energy is transferred to your reserves. The joystick controls the erection of shields as follows:

1	UP and LEFT
2	DOWN and LEFT
3	UP and RIGHT
4	RIGHT
5	DOWN and RIGHT
6	
1+4	FIRE and UP
2+5	FIRE
3+6	FIRE and DOWN
1+2+3	FIRE and LEFT
4+5+6	FIRE and RIGHT

During defence, the drain on the psychic energy reserve depends on the size of shield and the time for which it is held. You can alter the shield pattern during the flight of the bolt if the attacker uses evasive manoeuvres. The shield flickers and the energy reserve increases. If it hits the unprotected areas, the player flickers, and energy is lost.

4. HEAD THROWING

The participants in this event have detachable heads, the object is for players to throw their own heads as far as possible down the field. The throw has several stages.

First the combed head and body makes a run up to the throwing line, by alternately pressing the LEFT and RIGHT controls, the faster the "waggle", the faster the Human runs. The speed is displayed by a moving bar in the left-hand box at the top of the screen.

Just before crossing the line, the players must press and hold FIRE. This freezes the action while the second display box shows the head rotating up from the horizontal to the vertical. This is the angle at which the head will be thrown when FIRE is released for maximum distance, you should get it as close to 95 degrees as possible.

When you release FIRE, the head is thrown and the second box now displays the length of throw. Once the head straightens out into level flight, some extra distance can be gained by pressing UP and DOWN alternately - this waggles the ears to generate lift.

5. METAMORPH MARATHON

In this event the player has to negotiate an obstacle course against the clock. The creature tackling the marathon is a metamorph capable of altering its body shape to suit the terrain. The player must decide which form is most appropriate to the current section of the course.

At the top of the screen are five displays, which have the following functions.

The box at top left is the speed/power meter and indicates either the speed (when running or flying) or the stored jump energy (for jumping). The box below it shows how much of the course the player has covered so far.

The third box displays four red bars which represent the total energy left. Movement and heavy impacts cause more rapid energy loss, finding power pills restores energy. The marathon ends when the metamorph runs out of energy.

The fourth box displays the elapsed time in minutes and seconds, while the final box displays the active control keys for the currently selected body shape.

The metamorph has five forms available, as follows:

REST STATE

At the start of the marathon the metamorph is in its rest state depicted as a pulsing blob of unstable cells. Pressing LEFT, RIGHT, UP and DOWN while in the rest state will transform the metamorph into one of its four mobile forms. Conversely while in one of the mobile forms, the rest state may be achieved by pressing FIRE. To convert from one mobile form to another the metamorph must first return to the rest state.

RUNNER This form is acquired by pressing RIGHT. The metamorph sprouts legs and will run towards the right if the LEFT and RIGHT controls are pressed alternately. The metamorph's speed depends on the rate of 'waggle'. This form can only travel over level ground. Hitting a wall at speed costs energy.

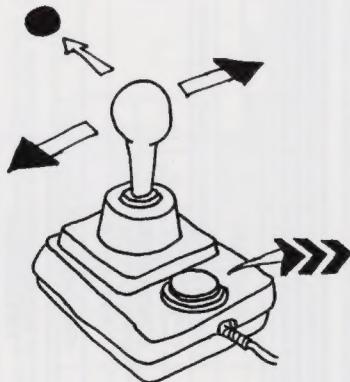
BURROWER This form is acquired by pressing DOWN. The metamorph converts to a smooth streamlined bell-shape which can pass horizontally through certain obstacles to the right only. This movement continues so long as the UP control is pressed. The burrower can also move over level ground but at an increased energy drain.

JUMPER This form is acquired by pressing UP. The metamorph grows a spring-like piston enabling it to jump to great heights. If you do a greater distance away from other than the jumper will cause excessive energy loss on impact. Pressing DOWN tensions the spring (the time that Karnov is held determines the strength of jump). Once the metamorph lifts off, the player can either continue 'wagging' to rise vertically or pressing UP (without wagging) to fly across the course at the speed stored during the waggle phase. Releasing the controls causes the flyer to lose its aerial tension and drop from the sky until it lands, or you waggle back up to flying velocity again.

FLYER This form is acquired by pressing LEFT. The metamorph sprouts helicopter blades which allow it to fly either vertically or diagonally up and to the right. The blades are spun up to speed by pressing LEFT and RIGHT alternately. The speed/power meter indicates the flying speed.

Once the metamorph lifts off, the player can either continue 'wagging' to rise vertically or pressing UP (without wagging) to fly across the course at the speed stored during the waggle phase. Releasing the controls causes the flyer to lose its aerial tension and drop from the sky until it lands, or you waggle back up to flying velocity again.

SUPER SPRINT



ICONS AND HOW TO USE THEM

There are 11 items to be collected:

K's: 50 of these are needed to gain an extra life
Apples: These will give you much needed extra fire power.
The remaining nine items are icons that may be collected and saved for use later in the game. When collected, they will appear in windows at the bottom of the screen. The first five icons in the inventory will highlight alternately as you move Karnov left or right. If you wish to select a specific icon you must adjust Karnov's position on screen until the one you want is highlighted. Then press the 'Y' key (all versions).
Boots: These double Karnov's jumping power and help him run faster.
Bombs: Don't just use them to destroy Ryu's Monsters! These can also be used to destroy obstacles, like walls. They can also be stockpiled - but don't stand too close when you use one. You could blow yourself up!
Ladders: Use these to collect 'out of reach' icons.
Boomerangs: These give Karnov extra attacking power. Jump up to catch it so you can use it again!
Flames: These give Karnov superior firepower for a limited time. The last four icons will become available to you at the appropriate time.
They are as follows:
Wings: for flying!!!
Swimming: Allows you to swim faster.
Helmet: Allows you to swim faster.
Mask of Perception: This will flash when invisible icons are on screen. Pressing 'Y' will make them visible.
Trolley: Use this for downhill travel. It kills all monsters in its path.

Remember many items will be out of view, so explore your surroundings and choose your route with great care, because now you are on your own.

KARNOV™

QUICK CONTROL GUIDE

Spectrum, Spectrum +, Spectrum 128, Spectrum +2, Spectrum +3.
Jump/Climb Up - Q
Down/Climb Down - A
Left - O
Right - P
Fire - Space
Use selected icon - Y
Pause - Enter
Reset Game - Symbol Shift # & Break
Or Kempston Joystick.
Sinclair Joystick also works on +2.
Commodore 64/128
Jump/Climb Up :
Down/Climb Down - /
Left - Z
Right - X
Use selected icon - Y
Pause - RUN/STOP
Reset Game - RUN/STOP & RESTORE
Fire - Space
Or Joystick, Port 2.
Amstrad CPC 464/664/6128
Jump/Climb Up - Q
Down/Climb Down - A
Left - O
Right - P
Fire - Space or Copy
Use selected icon - Y
Pause - Esc
Reset Game - Shift & Ctrl & Esc
Or joystick 1, or Cursor Keys.

SUPER HANG-ON

Bike Control	Keyboard Key Spectrum Amstrad	Joystick
Accelerate	Q to R	Joystick FORWARD
Brake	A to F	Joystick BACKWARD
Turn LEFT	I or O	Joystick LEFT
Turn RIGHT	P	Joystick RIGHT
Turbo	ANY OF BOTTOM ROW	FIRE BUTTON
Game Functions	Spectrum Amstrad	Commodore 64
Pause	H	ESC
Continue	ANY KEY EXCEPT A	ENTER
Restart	PRESS H THEN A	PRESS ESC THEN CLR

REAL GHOSTBUSTERS

CONTROL KEYS (Amstrad and Spectrum versions)

	AMSTRAD	SPECTRUM	
	Player 1	Player 2	Player 1
UP		Q	P
DOWN		A	L
LEFT	-	Z	N
RIGHT	-	X	M
GUN	C	(decimal point on keypad)	H
PAUSE	ESC		ENTER

Control of Atari ST, Amiga and C64 versions is by joystick.
Hold down gun and release to produce beam.
NB: Spectrum player 1 can also use joystick 1.

The characters are armed with both guns and Proton Beams. Creatures can be shot with either weapon to transform them into ghosts. The ghosts can then be zapped with the proton beam to store them in the players' backpack. Ammunition for the gun is un-limited; the proton beam has a limited charge which is displayed at the top of the screen. Also displayed are the number of lives remaining and the number of ghosts collected.

Gee Bee AIR RALLY

QUICK CONTROL GUIDE

On all versions, once the game has loaded you will be presented with a menu screen (not on C64/128) which allows you to start the game, select a joystick or keyboard, or redefine the control keys.

If you are playing on a Spectrum, Spectrum 128, Spectrum +, Spectrum +2, or Spectrum +3 and intend to use keyboard controls, you must redefine the control keys . . .

Start-O
Redefine Keys-R
Select Joystick-J (Sinclair or Kempston or keyboard)
If you are playing on an Amstrad CPC/464, 664 or 6128 . . .

Start-S
Redefine Keys-R
Select Joystick-J
Up-Q
Down-A
Left-O
Right-P
Throttle-SPACE
Pause-U
Resume Game-Any key

FIRETRAP

FIRETRAP PLAY OPTIONS...

When the game has loaded into your computer, the screen will display a Menu with the available play options. Type the number listed next to your desired option.



HISTORY AND BRIEFING

When the first part of the game has loaded into your computer, the screen will display a menu consisting of five options. Use UP and DOWN controls to highlight an option, and press FIRE to select that option.

To exit a screen, highlight the RETURN option and press FIRE. Otherwise select CONTINUE to access all of the available information.

1. ARCHIVES.

Selecting this screen will display a brief background to the Corporation and your mission.

2. MISSION BRIEFING

This screen will advise you of your mission, and provide you with technical data of the asteroid.

3. REFINERY SPECIFICATIONS

This screen provides technical data on your Mobile Refinery Unit. All operations are controlled remotely from the Refinery.

4. M.R.U. SPECIFICATIONS

Mobile Robotic Units (MRUs) are specialised remotely controlled vehicles which you will use to survey the asteroid, mine any valuable materials, transport the spoils, and defend your interests against rivals.

These screens provide information on the types of MRUs available to you, a description of their functions and the speed of the vehicle.

5. CONTINUE

Selecting this option will load in the next part of the game from cassette or disk.

M.R.U. SELECTION SCREEN

From this screen you will be able to select a 1 or 2 player game and the duration of the game.

Enter the name of player 1, then press RETURN. You will then be prompted to enter a previous mission code. If this is the first time you have played CORPORATION press RETURN. Enter the name of player 2, or just press RETURN to play against the computer.

You may now select from a simulated 12, 24 or 36 hour game by pressing 1, 2 or 3 on the keyboard.

SELECTING MRUs

The screen is split into two halves, with player 1 on the left and player 2 on the right. On each side are displayed the mission name, the player's name and credit rating, the amount of crystals recovered and the time remaining before the asteroid's destruction. Your credit rating indicates how many MRUs you can acquire.

In the lower portion of the screen is a list of available types of MRUs. The columns to the right of the MRUs indicate the number of MRUs you have purchased. There are 2 columns marked 'S' for solar and 'F' for fusion, denoting the MRU's power source.

Select MRUs by using UP and DOWN to highlight the vehicle of your choice, then LEFT and RIGHT to select either solar or fusion drive. Pressing fire will enable you to buy or sell the selected type of unit by using UP or DOWN controls. Your credit rating will be adjusted automatically. If you do not have the necessary credit to purchase the selected MRU you will be prevented from doing so. Pressing FIRE will return you to normal selection mode, allowing you to choose a different MRU.

Each player should continue to select MRUs until all credit is used up. After both players have selected the CONTINUE option, the main game will load into your computer.

THE GAME

When your refinery has landed on the asteroid your mission begins. The screen displays a computer simulated grid plan of the surface of the asteroid, with the position of your refinery marked as a red square. The shaded area of the grid represents the part of the asteroid which is in darkness. This area will move around the asteroid as the game progresses. Below this grid is a list of the MRUs available for the mission. Select an MRU as in previous menus by highlighting the name of the vehicle using UP and DOWN, and the power source type using LEFT and RIGHT.

Pressing FIRE will select a vehicle of that type, and the screen display will change to an enlarged grid depicting the surface of the asteroid. This enlarged grid corresponds to one small highlighted square on the asteroid grid at the top of the screen.

SELECTION AND MOVEMENT OF MRUs

To select an MRU on the surface of the asteroid, place your cursor over the selected MRU icon and press FIRE. A 'ghost' icon will appear which you can then move over the surface of the asteroid. As you move from one enlarged grid to another the grid will be redrawn. You may move from the top of the asteroid grid to the bottom, or from one side to the other. You may program up to two MRUs in this manner up to a range of 20 grid squares. If you do not wish to move the full range of the MRU press FIRE. The computer will now direct the movements of the MRU, allowing you to plan your next move.

Pressing FIRE while the cursor is over an empty grid square will move the cursor to the asteroid grid, enabling you to scan any square from this grid. Pressing FIRE when the cursor is over the refinery on the enlarged grid will return you to the main refinery menu.

PAUSE

The game may be paused by either player by selecting the HOLD GAME option on the refinery menu screen. Restart the game by selecting CONTINUE.

SURVEYING AND MINING

It is known that certain parts of the surface of the asteroid are unstable, and would probably not support the weight of surface vehicles. Luckily, your survey craft can not only detect crystal deposits but also unstable ground. As your survey craft moves across the asteroid it will leave beacons. A yellow beacon signifies a deposit of crystal, and a blue beacon marks unstable ground. Any vehicle other than the booster powered survey craft should avoid unstable areas!

Once a deposit of crystal has been discovered it may be mined by moving a mining unit over the grid square. The mined materials are left on the surface of the asteroid ready for transportation to the refinery. The beacon will change to purple once crystals have been mined.

Containers of crystal may be loaded into truck units by moving the unit over a purple beacon. Each truck may carry up to ten containers. To unload a truck at the refinery the MRU must be moved to an adjacent grid square. The load will be transferred automatically.

HOSTILITY AND DEFENCE

As the Commander of mining operations you must be aware of the fierce rivalry between Corporations. Some would stop at nothing in order to fulfill their quota and maintain their credit limit! In order to defend the interest of the Corporation, you may also purchase cloaking units and missile launching units.

Cloaking units can protect your operations from enemy radar and visual scanning systems. They are effective up to a three grid square radius, cloaking both their own presence and that of any units within their range. Detection by the opposing force is only possible if one of their MRUs is within 1 grid square of a cloaked unit.

Rocket launchers are equipped with highly accurate energy-seeking missiles which are capable of penetrating most shield defences. The gun decks are armed with smaller, less powerful 'Dart' missiles. In order to launch a missile you must first access the visual display screen. Place the cursor over an MRU icon and press FIRE twice in rapid succession. The screen will change to a view of the surface of the asteroid and the MRUs status display. To exit this screen, move the cursor to the bottom of the visual display and press FIRE. Note that you will be unable to obtain a visual scan from an MRU which is shutdown through damage or lack of energy.

The status display consists of a radar screen showing the proximity of other MRUs. To the left of the radar is a blue bar indicating the unit's shield strength, and to the right a red bar showing the unit's energy level.

You may pan the surface view by moving the cursor LEFT and RIGHT. If any objects are identified on the asteroid's surface the cursor will change colour. Pressing FIRE will enable you to zoom in on the object, providing you with a visual display of it.

To arm the rocket launcher or gun deck, move the cursor to the top of the visual display and press FIRE. The cursor will change to a cross-hair sight, allowing you to aim at an object on the surface. Press FIRE to launch a missile.

METEORITES

Due to the lack of a protective layer of atmosphere, there is a great probability of strikes by meteorites. Commanders should maintain regular visual checks on all units and be prepared to move them out of danger whenever possible.

SUCCESSFUL MISSIONS

If you succeed in completing your mission and mining the required quota of crystals, you will be given a mission code. Write down this code for future use. When prompted at the beginning of a game for your mission code you can obtain a higher credit rating which will allow you to buy more MRUs, though naturally the Corporation may decide to increase the target quota of crystals!



KNIGHTMARE

I place you somewhere in time, in a land where strangers are not welcome. Survival is your aim, knowledge is your target. Search the dungeons and rooms of Damonia Castle for the objects which may help free you from the clutches of the dark castle and its fantastical inhabitants.

Your advisors are two oracles, who act as clue givers. One oracle is good, and often gives correct clues in the form of riddles etc. The bad oracle will do everything it can to throw the knight into certain danger, and death. The knight may consult the oracles, but only one will answer, and may not be cross-examined by the knight. By carefully studying the contents of both oracles' statements, valuable clues may be learned.

Your life force is represented by a candle at the edge of the page. It will decrease throughout the game. Life force is further decreased each time the player is hit by a guard, for example, and life force never increases.

Each page of the book details some place within the castle, into which life is breathed when you direct the knight into it. The dungeon master and oracles watch over all of the knight's actions and each may appear from time to time to offer comment.

To perform specific functions within the castle. You may use one or two word commands.

Select the first word of your required command by pressing the first letter of that word. If the speech bubble at the top of the screen does not display the word you require, press the shift key. This will show you the next available word.

Certain commands, such as Load, Save or Quit are one word commands.

To see your inventory (the things you are carrying) press the 'I' key.

To use a spell, you must select the word SPELL as the first word, then the name of the spell as the second word, then press Enter or the Life button to execute that spell. Note! You first have to find the spells!

ANVIL: This is a large, cast-iron anvil, which hovers at the top of the screen, causing evils to be squashed into the ground.

CASPAR: Caspar the key. May be used on certain doors within the castle.

ALCHEMY: Turns characters to a solid gold sphere. Most objects turned to gold may then be collected by the knight as treasure.

ICE:

A rain cloud will form and freeze everything. As soon as the cloud vapourizes the characters will come back to life.

TOAD:

Turns characters into 'warty' toads.

METAMORPH: Turns characters into different characters.

FIGHTING

In order to fight you will need to find a weapon, such as a sword, then by moving next to the character you wish to fight and pressing the fire function repeatedly you will be able to engage in combat.

You may also pick up bricks to throw at other characters. To do this you may either use the instructions to tell your knight to 'Throw Bricks' or you may set the first command word to 'Throw' and then use the fire function to trigger the throwing.

SAVING AND LOADING

If you choose the command 'Save' this will save your current position for future usage. You may return to this position by selecting 'Load'. Please note, this is a RAMSAVE, and is not saved to cassette or diskette, and so if you switch your computer off you lose your original position.

Function	Keyboard Key			Joystick
	Spectrum	C64	CPC	
Fire	0 or 5	=	DELETE	Fire Button
Move Left	6 or 1	<	<	Left
Move Right	7 or 2	>	>	Right
Move Down	8 or 3	?	▼	Down
Move Up	9 or 4	:	^	Up
Pause Game	BREAK	F1	ESC	
Resume Game		Use 'Fire' function		
Quit Game	Q then Y	Q then Y	Q then Y	
Start Game		Hold down 'Fire' function key		
View Words	SHIFT	SHIFT	SHIFT	
Enter Word	ENTER	RETURN	ENTER/RETURN	



The colonised sector of galaxy M1771 contains 32 star systems with 3 to 4 inhabitable planets in each, making a total of 118 colonies. Starting in orbit around Star Phi Xi-8 planet 4 (PhiXi-8/4) you must liberate every planet from the oppressive enemy forces. At the same time, rebels left on the planets before the occupation may attack the enemy bases or even be successful in defeating the hostiles and recapturing their own planet.

There are 2 distinct sections to ACE 2088.

Section 1 - 'Deliverance':

The panel which represents the 'Deliverance' command console has 3 main displays.

1.1 - CRT display. This gives a graphical representation of the data being processed by the main computer.

1.2 - OPTION selector. This display is located in the bottom right of the panel and can be changed by moving the input device up/down. Press FIRE to select the current option. All of the options are self-explanatory and easy to use.
(Note: EXIT returns to the main OPTIONS directory.)

1.3 - LOCATION display. This can be seen in the top right of the panel and shows the current star system and planet number.

Two other displays are also present.

ANCILLARY Data. This display is middle right on the panel and shows textual data not displayed on the CRT.

MESSAGE line. Shows any in-coming messages and status changes.



Section 2 - ZIELGLER II FIGHTER:

'Deliverance' was initially equipped with a complement of 7 Ziegler II Assault Craft (ZAC) but dogfights and accidents have reduced this number to 3. They are not as agile or fast as the opposition's interceptors but are far better armed and defended. Capable of carrying 8 long range 'Fire & Forget' Fissile Missiles, 8 Rear launching point defence missiles and 4 fusion bombs they can have extra Hi-Shielding added and a Rapid Recharger fitted to the Anti Matter torpedo system.

Fighter controls are as follows:

For UP/DOWN, LEFT/RIGHT and FIRE, use joystick 2 on the C64 and either KEMPSTON, SINCLAIR or KEYBOARD [Q,A,O,P,SPACE] on the spectrum.

'FIRE' either fires the pulse cannon OR the selected weapon.

'L' arms the long range missile.

'R' arms and fires the rear launched missile.

'T' arms the AntiMatter Torpedo.

'+' increases fighter speed.

'-' decreases fighter speed.

'M' initialises Auto Pilot and returns fighter to 'Deliverance'.

'N' plots a course for the nearest planet and manoeuvres the fighter onto course.

'W' toggles between the Scanner and Weapons Status display.

When you come within warp range of a planet the auto pilot overrides control and heads straight for the planet, thus avoiding ground-based defence lasers which would rip your ZAC to pieces in seconds.

When in orbit around a planet 'B' arms the bomb aiming system. An arrow appears next to the clock display showing the direction to the nearest enemy ground base, when you are directly on course this changes to an UpArrow. As soon as the base comes within range the scanner changes to a bomb sight and displays the target moving at high speed towards you. (On the Commodore version the targeting graticule changes and displays the target site). Press 'FIRE' when this is in the centre of the sight and you will score a direct hit. Pressing 'FIRE' before this will cause a premature bomb release.



GUADALCANAL

GAME SCENARIOS

On the disc (or cassette) are a number of scenarios. These are selected from the menu which appears on-screen when the game has loaded. Simply move the joystick to highlight the required game and press the fire button. The selected scenario will now load.

SCENARIO 1: A short three-day battle in which the player takes the American side. This is intended for gaining battle experience only.

SCENARIO 2: The full Guadalcanal campaign, with the player commanding the American side.

SCENARIO 3: Once again the complete campaign, but with the player in the control of the Japanese forces.

SAVED GAME: A facility to allow the player to load and play a previously saved game position. You are prompted to enter a filename (up to eight letters) followed by ENTER, after which the required data will load. Pressing ESC during filename entry will abort the operation.

GETTING STARTED

Your disc or cassette already contains a saved game (SIDE A: GAME, SIDE B: SCENARIOS) for a special scenario which gives you a few US units but no enemy. This is designed for learning the game and its controls. If you have the cassette version then this is the first block on the Scenarios side. From the loading screen select 'SAVED GAME' and type in TRAINER. Special note - Amstrad CPC cassette and disc users: unplug the joystick before typing the filename. There are no victories in this scenario, so to finish it you must use the SCRAPPAGE master icon. Most of the references to game play will now assume you have this scenario loaded and you are reading the manual.

THE SCREEN

The game display is divided into two halves. In the top half are the master icons and information on all the general features of game (anything not concerned with units): the control icons and information for the units themselves are in the lower half.

To the top right you will see a clock face and a box showing the date and digital time. This runs at a speed of 1 minute for every 10 seconds of real time. The clock NEVER stops, although it may be speeded up.

Beside the digital clock is the 'phase' indicator which has four different positions: dawn, daylight, dusk and night. This is used mostly for aircraft timing, as they may not be launched at night and any air capability will be cancelled at dusk.

The flag in the top right corner simply shows you which side you are commanding (a useful reminder for saved games.)

Above the clocks are ten icons - the MASTER ICONS. Each has a

specific purpose which is explained in detail later in the manual. A master icon is selected by moving the joystick until the chosen icon is highlighted and has the small arrow pointing to it. Pressing the fire button will then activate that function. The first icon shows a miniature map. Pressing fire on this will put you in control of the lower half of the screen.

The long, narrow map below the master icons is the STRATEGIC MAP, and represents the overall battle zone. The large land mass along the bottom of this map is Guadalcanal Island. To the east are American-controlled waters, while the Japanese waters are on the west. You will notice several flashing markers on the strategic map. These indicate the position of any active units. However, the markers do not distinguish between friend and foe, or the units type.

The main feature of the strategic map is the large white rectangle. Directly beneath the overall map, in the lower game area, is an expanded view of the area enclosed by this rectangle. This 'window' is the BATTLE MAP: it shows the features and units of the smaller area in detail, and may be moved to any position in order to examine or control your units.

In the lower right of the display is the REPORT BOX, which shows all the information on your forces.

Finally, at the very top of the screen is the RADIO, where all incoming messages are displayed.

MASTER ICONS

On the main display, just above the clocks, are ten squares. These are the MASTER ICONS and control aspects of the game not concerned with units themselves but with the game generally.

To select any icon, simply move the joystick until the required square is highlighted and has a small arrow pointing to it. Pressing the fire button will now execute that function.



MAP TOGGLE

Toggles between the battle map and the master icons. If this icon is highlighted and fire is pressed, then control will be passed to the battle map cursor. If the battle map cursor is NOT over any unit and fire is pressed, control will return to the master icons.



CLOCK WINDER

While the fire button is held down, the clock will advance at great speed. Simply release the button to return to the normal game speed.

Be careful with this function. You are advised not to advance the clock while there are incoming messages until you are certain of their importance.

SCOUT SELECTION

A list of your six scouts is displayed, along with their current condition. To activate any scout, move the joystick until the desired rank is highlighted and press the fire button. The scout will now show ACTIVE. Press the fire button once more to return to the master icons. Only one scout may be active at any time and will appear next to your base on Guadalcanal.



INTELLIGENCE

Two boxes are displayed – one marked ESPIONAGE, the other COUNTER ESPIONAGE. Each box has a figure in its centre, which represents the percentage of personnel assigned to each. Move the joystick left and right to adjust these figures, or press fire to return to the master icons. For a full description of its effect see the INTELLIGENCE section.

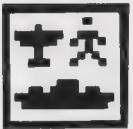


STATUS

This displays three columns showing the active fleets, land units and air units (if any) along with a colour-coded condition, as follows:

- Green – OK.
- Yellow – Weak or in need of attention.
- Red – Critical.
- Flashing – Currently in combat under attack.

Press fire again to return to master icons.



WEATHER

The simplest of all, this icon displays the current weather conditions: GOOD, POOR or STORMY (see WEATHER EFFECTS).



NAVAL LOSSES

Any ships larger than a destroyer which have been sunk during the battle will be displayed here in chronological order. Only your losses are shown.



HOLD

The clocks are stopped and any movements or battles are frozen, although any backlog of messages are still decoded to the radio display. Simply press fire again to restart the clocks.

SAVE GAME

May be selected at any time during the game. Type in the filename you wish to call your position (up to eight characters) and press ENTER. Special note – Amstrad CPC cassette and disc users: unplug the joystick before typing the filename. The complete state of the game is saved, but you will lose any message currently being decoded to the display. Once saved, the display will reset and place the master icon to MAPTOGGLE. (Pressing the ESC key will abort this function if selected in error).

SCRAP GAME

Should you wish to load another scenario or a previously saved game, this will return you to the main menu. The current game will be lost unless you have saved it. There is a delay of two or three seconds built into this icon in case it is selected by accident. You need to hold the fire button down until the main menu appears.

UNITS

There are six types of unit for each of the opposing forces: Fleets, Land Units, Aircraft, Seaplanes, Bases and Scouts. Units are represented on the strategic map by small flashing dots, and on the battle map by square symbols. In the symbol descriptions that follow, references to "colour" mean white for the Americans, red for the Japanese.

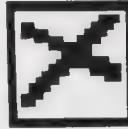
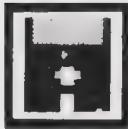
FLEETS

Naval Task groups are split into three categories – Escort groups, Carrier groups and Transport groups. Each has its own characteristics and requires the correct tactics for its most effective use. The map symbol is a black anchor on a coloured background.

ESCORT GROUPS consist mainly of heavy gunships and are best used as naval cover for other groups, land bombardment, scouting and so on.

A CARRIER GROUP will contain at least one aircraft carrier, which makes a strong, protective escort with its own Combat Air Patrol (CAP).

TRANSPORT GROUPS are your army's lifeline.



LAND UNITS

Each unit suffers from malaria according to the length of time it has spent on the island: this can have a devastating effect on the fighting ability of the unit, no matter how well equipped it is. Malaria levels may be decreased only by the issue of medical supplies. Finally, morale plays a large part of the unit's combat fitness. The longer a unit is in battle, the more its morale drops, taking the strength with it. However, while not in battle, morale will slowly rise. General supplies will have a more immediate effect on morale.

Marine units have an extra ability not available to the Japanese infantry. DIGGING-IN almost doubles the unit's fighting strength but may only be used as a defensive measure. Once 'dug-in' the unit becomes unable to move until ordered to 'move-out', an operation taking some time to execute.

AIRCRAFT

Air units may be based either on a carrier or at Henderson Field – they are represented by a coloured airplane on a black background. The units based at Henderson will arrive at appropriate times during the battle. The use of these aircraft is limited by the number of points you have stored of aviation fuel at the base – no fuel, no takeoffs. There are no such restrictions to the carrier units, but any damage incurred by the carriers will affect the launching ability of the aircraft. If the deck itself becomes damaged then no launching or landing of aircraft will be possible until it is repaired. Damage to Henderson Field will also prevent aircraft activity but the engineers on the island will inform you of how long the repairs will take. The airfield is only a clearing, and repairs are a simple case of filling in the holes...

All air units based on a carrier are followed by an identifying letter. For example, all those based on the Enterprise are called Unit 1E, 2E and so on. The American code name for Guadalcanal Island during the battle was Cactus. Aircraft based at Henderson Field thus became known as the 'Cactus Air Force'. Any air unit which is based at Henderson is labelled CAF1, CAF2 etc. It is important to remember where their home base is when returning aircraft to refuel. The carrier they came from may not be there when they return!

You should also note that carrier air units may land on any other carrier or even at Henderson Field. CAF UNITS MAY ONLY LAND ON HENDERSON. They will not be given permission to land on carriers – the capacity of aircraft carriers was limited and they had only sufficient crews to deal with their own aircraft.

SEAPLANE

All enemy forces will remain unseen unless they move within range of your fleets, bases or land units. The seaplane, however, may fly over any sea region in search of enemy shipping.

BASES

There are three bases on Guadalcanal. Two of these are Japanese and are simply supply dumps – they are shown in red. The third is Henderson Field, which has an air capability of its own and is also the supply dump for the US troops. It is indicated on the map in white.

Just above each base is a coloured anchor on a blue background, which represents the safe harbour for that base, where transport ships may drop anchor.

I

J

K

L

M

N

O

THE MAPS – AN INTRODUCTORY TOUR

The upper STRATEGIC MAP is an overall view showing where your forces are and the area you are currently controlling. All control of units is carried out in the lower BATTLE MAP.

To switch control to the battle map, move the joystick until the top left master icon (with the miniature map) is highlighted, and press the fire button. The icon now returns to normal and the arrow disappears. You will notice that a pulsation 'cursor' has now appeared on the battle map. For the time being DO NOT move it. This command cursor controls all your units, and the positioning of the window on the upper map.

If you now press fire again, the cursor will disappear and the first icon will again be highlighted. Control has now returned to the master icons. When the fire button is pressed while the cursor in the battle map is NOT over a unit, control will always return to the master icons.

Now press fire once more, returning to the battle map. Hold the joystick to the right and the cursor will move across the battle map until it reaches the edge. Keep holding to the right and the window will start to scroll. Notice that the white rectangle on the strategic map follows the battle map...

On the far right of the battle map you will see a column of white anchors. Move the cursor over any of them and you will see "SUPPLY PORT" appear on the top of the report box. Whenever the cursor is placed over a unit or map feature this line will show its name.

The line of anchors are the US supply harbours and are NOT units. They may not be moved or altered but are a feature of the map. These will be explained later.

Now fast-scroll to the far left of the map, where you should see a line of red anchors. These are the Japanese supply harbours.

WARSHIP CODES

CV	Aircraft Carrier
BB	Battleship
CA	Heavy Cruiser
CL	Light Cruiser
DD	Destroyer
AP	Transporter

CONTROLLING UNITS

Every unit which is currently active may be examined for its condition, or orders issued to control its activities. Control of units is by means of CONTROL ICONS: most of the icons are self-explanatory, but a complete description is provided in the following section, CONTROL ICONS.

By placing the command cursor over a particular unit and pressing the fire button, the list of the control icons for that unit is displayed in the report box. Each type of unit has a different selection of the control icons.

To activate any control icon, simply move the joystick until the icon is highlighted, and press the fire button. The report box will now display the appropriate information. Pressing the button once more, in most cases, will return you to icon selection. Some icons are a multi-stage function and will give a second list of icons to select. In these cases the EXIT icon will always return control to 'icon selection'.

THE CONTROL ICONS



EXIT
The most common icon. This returns you from the currently selected action, or back to cursor control of the battle map. All units have this icon, even enemy units.



MOVE
A two-stage icon which first allows you to examine the current route which a unit is taking, and then redirect it with the cursor. Then EXIT is selected from the sub-menu, control will return directly to the map and not to the unit. This speeds up commands and avoids confusion.



FORMATION
Only to be found in naval units, this very useful icon displays all ships currently assigned to the unit. The list is divided into two sections. The main list is of up to five major warships with their type and name. You should note here that the ship at the top of the list is the unit's flagship and may not be removed

from the unit. Each major ship is colour-coded as follows:
Green – means no damage and fully operational.
Yellow – some damage has occurred.
Red – the ship is either on fire or sinking.

To find out the condition of any ship, move the joystick back until its name is highlighted, then press fire. The damage currently sustained by the ship and the condition of the fires will be displayed. Pressing the button again will return you to the FORMATION display. Finally, to exit from FORMATION, push the joystick forward until the word FORMATION is highlighted and press fire. You may use this icon on enemy fleets, but it will only show the formation, not the damage inflicted.

After the main list is the size of the naval unit's destroyer screen and the number of transport ships, if any.



STATUS
An icon which appears on three types of unit – air units, land units and Henderson Field. It serves only to give information and has no effect on the unit. On Henderson this will display how much aviation fuel is stored and the condition of the runway. If the runway is closed then the estimated time of repairs will be shown.



COMBAT
A multi-stage option which appears in all fighting units. It allows targeting of the unit's fire power onto any enemy unit, and instant withdrawal from any battle. On selecting this icon, three more control icons will appear, as well as the strength of the unit and its current target. At this point, selecting EXIT will return to the main icon selection and WITHDRAW will instantly cancel any target. ATTACK will put the cursor into 'target select' mode.



ATTACK

When selected, the cursor will change from white to red to indicate that target select mode is in operation. Move the cursor over any enemy unit and press the fire button. If it is valid, the target will be locked in and the battle will begin. If it's not valid, then the target line will read NOTHING. Once the fire button is pressed the cursor will return to white and the joystick will once again control the icon selection. Notice that the cursor may only move as far away from the unit as its firing range allows. Any move orders currently logged for the unit will be cancelled and must be reissued if movement is to continue. The unit will continue to attack its target until you change its orders or the target moves out of range.



WITHDRAW

Instantly cancels any target which the unit is attacking. Very useful if you wish to redirect an air attack or conserve ammunition against a retreating enemy.



AIR

This controls all aircraft launching. On selection, you will see a list of all units and their readiness for takeoff. Only units which are ON DECK may be launched: all other units are rearming and will move on to the deck in turn when space is available. Only one air unit may be 'on deck' at any one time.

To launch an air unit, select the LAUNCH icon and press fire. The unit currently on the deck (or runway) will now begin to take off. During this time LAUNCHING will flash on the display and will remain until the unit is fully airborne. At this point the unit (except for CAPs) will appear as a marker in its own right on the two maps. Pressing the fire button will exit from the air option (launching continues in real game time). If the air capability is lost then no access will be allowed to any launching facilities.



ANCHOR

This is a special icon which is only to be found in naval groups with transport ships. When first selected, the current state of the unit's anchor will be shown as either up, weighing or anchored. To change the condition you must select the ANCHOR icon once more and press fire. Note that this may only be performed while the unit is in a friendly harbour and will have no effect at sea. Dropping anchor is instantaneous; weighing the anchor, however, will take some time. The unit may only move when the anchor is up.

For a full description of how to use the anchor see the section SUPPLY RUNS.



HOME

All air units have their own original home base, either an aircraft carrier or Henderson Field. This Auto-HOME facility will send the unit directly back to its original base. However, the unit will fly to the position at which the base is when fire is



pressed. If the base is a carrier and it has moved by the time the air unit reaches that position, then the unit must be redirected.

This icon may also be used on the transport group. Its purpose here is to send the fleet back to its map edge harbours. The fleet must be moved manually to the island.

TACTIC

Only used by US Marine units. When selected, you may toggle their condition between DIG-IN and MOVE-OUT. While the unit is dug-in, its strength will almost double but any mobility will be lost. Mobility may only be regained by changing its condition back to MOVE-OUT. Digging-in is a tactic which will increase the resistance of US units to Banzai attacks and is purely a defensive measure.



SUPPLY

Unfortunately, there is no brief description which can be applied to this option. It appears in different units with different functions, in different situations – each of which are explained in the sections SUPPLY RUNS and ISSUING SUPPLIES.



TRANSFER

For the experienced player only, this is a very sophisticated tactical function and follows very strict rules.

To produce this option you must first move two naval units together. Only one of the two units will now have the transfer icon in its list. On selecting TRANSFER, you will see a display of the two fleets' formation with the colour-coding as usual. Ships may now be transferred from one unit to the other by moving the joystick until the required warship is highlighted, then pressing the fire button. The ship will transfer itself to the opposite fleet, if there is a vacancy!

There are rules to this operation and it should be used with great care. Too few ships in a unit will leave it wide open to attack and easy pickings for submarine strikes. Rules:
Transport ships may not be transferred and do not appear in the list, although they are still there. Aircraft carriers also may not be transferred and pressing the fire button will have no effect on them. Finally, the unit's flagship (see FORMATION) may not be removed. To exit from this option, simply move the joystick forward until Exit is highlighted and press fire. Note that a TRANSFER operation will cancel the movement orders for both units.



GAME SELECTION

After loading, the Game Selection screen appears. This enables the player to alter various factors in the simulation before starting play. You can also LOAD a previously SA VED game, play the main game or go directly to the Orbit section of the game. Note that the simulation is set on loading for the "beginner's" level. It is recommended that you first try running a few simulations without altering these settings to get practice.

1) Set American Leader Type

The box in this area with the tick in is the currently selected type of President. If the joystick is moved sideways, the yellow command cursor will move from box to box. Pressing the fire button when the cursor is in the desired box will cause a tick to appear. That President type is now selected.

2) Set Soviet Leader Type

Moving the joystick down will put the command cursor into this area. The type is set as above, but note that you cannot have both a "Dove" President and a "Dove" Soviet leader (hopefully this is not true of the real world).

3) Set Game Level

This has various effects on the game and at first you should leave it set on the "EASY" level. When you have mastered the mechanics of the game you can progress to the harder levels.

4) Action

The various possible actions are chosen in the same way as above, by positioning the command cursor and pressing the fire button. Actions are as follows:
PLAY: This will start the game.

LOAD: Is used to load a previously SAVED game. See the LOAD/SAVE instructions (Section 14).

ORBIT: Selecting this will take you directly to the orbit section of the game. You can then practice fighting in orbit. See the Orbit Section (Section 15).

BORDER DISPLAY

NOTE. The word SELECT has a special meaning in this manual. It means position the current command cursor below the icon in question and press the joystick fire button. Also note that the numbers in square brackets, for example [C1], refer to the numbers printed on the screen diagrams in this manual.

HIGH FRONTIER is a multi-screen game. All screens (except the orbit screen) have a common BORDER DISPLAY of icons and information panels, at the sides and bottom of the screen. The contents of the central screen window depends on which screen is selected.

The lower command area is composed of boxes containing icons - these are the COMMAND icons [C1-C6]. Below these is a yellow cursor - the COMMAND CURSOR. The command cursor can be moved left or right with the joystick.

[C1] TELEPHONE - The president's direct line to you.

[C2] WORLD - Shows the world and the BCOM pad and allows time to pass

[C3] SHIELD - SDI Command screen.

[C4] CALCULATOR - Research & Development (R & D) screen.

[C5] CAMERA - Espionage & Reconnaissance screen.

[C6] SKULL - Threat screen.

If a command icon has a yellow bar across the top, it means that the department wants your attention.

The box at the bottom right [C7] is the Calendar display. This shows the current month and year of the simulation. The bottom red line of this display is used only in the event of a Soviet missile attack: when this happens, the red line will display the Battle Computer's predicted time to impact in minutes and seconds (that is, the time remaining before the first nuclear warheads hit America).

HIGH FRONTIER

The right side area is the ORBIT DISPLAY [B1-B6]. When any system satellites are placed in orbit, the relevant Orbit Display Box will turn green. The number of system satellites currently in orbit will also be shown. If the display box turns yellow it means that the system satellites are armed or firing.

The left side area is the ATTACK DISPLAY: it will become active in the event of a Soviet nuclear attack. The box colours will change and the numbers of warheads, missiles, and so on, will be displayed. Each box has a different purpose:

- [A1] - The number of Soviet ICBMs heading for America.
- [A2] - The number of ICBMs that your systems have destroyed so far.
- [A3] - The number of Soviet nuclear warheads approaching.
- [A4] - The number of warheads that your systems have destroyed.
- [A5] - The number of nuclear impacts (explosions) on the American mainland.
- [A6] - The number of impacts on urban areas.

Note that this display has a slightly different purpose when the INQUEST screen is displayed.

PRESIDENT'S MESSAGES

To display this screen select the PHONE icon.

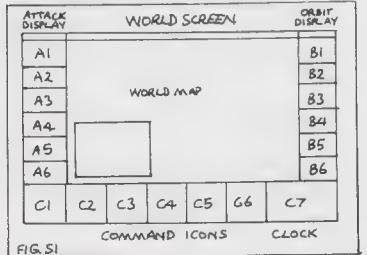
The President will ask questions or supply codes and orders via this screen. The "Number of Warheads" question is answered as follows:

As world tension increases, the President will issue you with the ARM/DISARM codes (push the joystick forward to open the code box), and will eventually order you to arm the system. You do this after selecting the SDI COMMAND screen. If the systems are armed they will automatically attack any Soviet ICBM missiles that are launched.

NOTE: The President will only issue the ARM/DISARM codes once in any game. It follows that it does not pay to ignore the President! Once the President has issued the Arm/Disarm codes AND you have received them, they will be permanently displayed below the President's message pad.

WORLD SCREEN

To enter this screen, select the WORLD icon. The screen displays a view of the Earth taken from a satellite above the North Pole (see Fig. S1). The blue rectangle marked BCOM is the Battle Computer's message pad.



The game starts with the WORLD screen in view (but time frozen). The date is March, Year 1 of the project as shown by the Calendar Display, bottom right. If the World screen is entered, time will pass, the satellites (moving white dots) will move in their orbits and the calendar will change. If the satellites stop moving, the game has paused and is waiting for some action by you. Normally this is because some department is trying to get in touch - the department will signal this by the appearance of a yellow bar over its command icon. After dealing with the interruption (or not - your choice), you restart the calendar by selecting the WORLD icon again.

If you wish to break out of the WORLD screen when the calendar is running, move the joystick left or right.

SDI COMMAND

To enter this screen select the SHIELD icon.

The SDI Command (see Fig. S2) is used to control any systems that you have built using the R & D screen. Note: until a system has been built, the SDI Command has no purpose, and you cannot give any commands.

The top display box [D9] shows a picture of the currently selected system. Below the picture is the number of system satellites that are currently on the ground.

The left and right boxes [D6, D8] of the second row are the predicted kills for each satellite of the system. The left box shows the missile kills per satellite, the right box the warhead kills (predictions are not always reliable!).

The centre box [D7] shows the current status of the system. The symbols are the same as the R & D status symbols, with the following additions:

CIRCLE WITH DOT - Some or all of the system satellites are in orbit.

LIGHTNING FLASH - System armed or firing.

The third row of boxes represents the SDI Command Line and enables players to issue command to the system:

[D1] BLUE DOWN ARROW

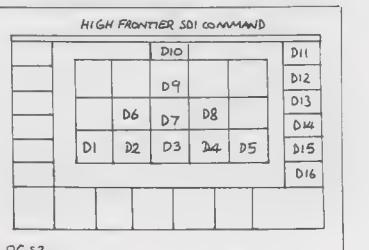
Is used to exit the SDI Command screen.

[D2] ROCKET

When you have successfully developed an SDI system, you will start to build satellites for that system. Obviously, these will not be in orbit until you have launched them. To place satellites in orbit you must first select the correct SYSTEM DISPLAY on this screen (see [D5]), then select this icon to set a LAUNCH COMMAND. The system satellites will now be launched into orbit, over a period of time, causing the number of system satellites in orbit to be shown in the Orbit Display. When a system has been ordered to launch, the Launch icon will be white. To cancel a launch command, simply select the Launch icon again.

[D3] LIGHTNING FLASH

If a system has been built AND is in orbit, it can be armed or disarmed, provided the player has the correct codes. Selecting the lightning flash icon will cause the Code Enter Device to appear [D10]. Moving the joystick forwards or backwards will alter the code letters and numbers. When you have set the correct code, move to the X at the right of the Code Enter Device: pressing the fire button will enter the code you have selected and return you to the Command Line. If the system ARM icon is white, the system is armed. To disarm the system, simply repeat the above but enter the disarm code.



[D4] JOYSTICK

Allows the player to take manual control of a system satellite in orbit (see the ORBIT section of the manual).

[D5] BLUE ARROW

Used to scan all the systems. Put the command cursor under this icon and press the fire button. The screen will change and display the next system. The current system is shown in the top box [D9]. Note also that the system's picture in the Orbit Display will be highlighted in white.

RESEARCH & DEVELOPMENT

To display the R & D screen select the CALCULATOR icon.

The object of the game is to build a defence of SDI systems which will destroy a Soviet missile attack. The R & D screen (see Fig. S3) is used to build and maintain these systems.

The R & D department will want your attention when it receives more money from the Federal budget. You can then decide which SDI systems you wish to try and develop, and assign money and personnel to the projects you are pursuing.

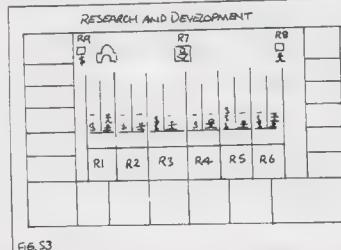
Each system has a project compartment [R1-R6], at the bottom of which is a blank if no work has been carried out on the project. (Thus at the start of the game, all these will be blank). The rest of the system compartment is used to hold the money and number of staff assigned to the project. You will notice white horizontal lines in the slots: these show the level of funding and staffing required to complete the next phase of the project.

At the top of the screen is a cursor in the shape of the White House, which can be moved left and right with the joystick. When the cursor is moved over the S symbol [R9], pressing the fire button will cause a \$ sign to appear in the White House doorway. (You will have to move the cursor to notice this). Move the White House over the dollar slot of any project: pressing the fire button now will assign money to the project. If the cursor is over the people symbol [R8], you can assign staff in a similar way. The type of each slot (money or people) is shown by the dollar or man symbols along the top of the screen (you can't drop the wrong symbol into the wrong slot anyway).

When a project phase is complete, the money will be spent and the new phase costs shown with the white lines. If the system's project status has changed, this will be shown in the status area. If you have developed a system, the number you are building will be shown below the system picture. The project status symbols are as follows:

X	- Some work has been carried out but no solution as yet
TICK	- The problems are nearly solved
ROCKET	- The problems are solved. The number you are building (this year) is shown below the system picture

If the Rocket symbol is shown without a build number, the project is complete. The white lines will now indicate the costs of maintaining the system. People shown in white are government employees: people in colour are not, and you have no direct control over their movements.



To exit the screen, place the White House over the blue down arrow [R7].

NOTE: For details of the various systems, see Section 24, SDI SYSTEMS (IN THE GAME).

ESPIONAGE & RECONNAISSANCE

To display this screen select the CAMERA icon.

The player should use this screen (Fig. S4) to try to find out what the Soviets are doing to defeat their systems. You can achieve this by assigning "espionage" points to various intelligence efforts. When any information has been gathered or further points become available, the department signals you as usual.

The espionage points available are shown in the top box [E5]. The points are assigned by moving the cursor over the desired camera and pressing the fire button. The camera boxes [E2-E4] represent the areas where you may place your intelligence effort. These areas are as follows:

[E2] LEFT CAMERA

Attempts to discover the number of ICBMs (missiles) currently targeted against you. The results of this effort are shown in displays linked to the camera by white lines. The number of land-based ICBMs is shown in [E6]. The number of submarine-based ICBMs is shown in [E7].

[E3] MIDDLE CAMERA

Tries to learn the number of warheads targeted against you. This is shown in [E8].

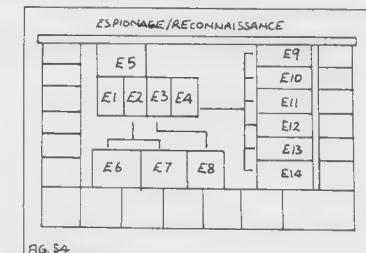
[E4] RIGHT CAMERA

Monitors any Soviet counter-measures against your systems. These are shown in the displays [E9-E14]. For example, if the Soviets had developed the ability to destroy ten laser system satellites, the number 10 would appear in the [E9] display.

[E1] BLUE DOWN ARROW

Exits the screen.

WARNING: Remember the Soviets will be using counter-espionage against you. This means that the figures you see are not necessarily true. For example, you may be shown that the Soviets are developing counter-measures against your systems, when in reality they have not. Obviously the more "points" you assign to an effort, the more likely it is that you have a true figure.



THREAT SCREEN

To display this screen select the SKULL icon.

The current world position, any changes in the Soviet Military forces, and the threat level are shown on this screen (see Fig. S5). The THREAT LEVEL INDICATOR [T1] has a yellow pointer: the closer this moves to the mushroom cloud, the more likely the possibility of war; the nearer to the heart symbol, the more peaceful.

The symbols and numbers at the lower right are the status of the various Soviet units, as follows:

[T2]	- ICBM silo status.
[T3]	- Status of ICBM-carrying submarines ("Boomers").
[T4]	- Air Force status.
[T5]	- Cruise Missile status.

The flag symbols are concentrations of Soviet Army units. If any new Soviet units are deployed, they will flash for a time when the Threat screen is first viewed. There may also be a message on the message pad.

This screen only provides information: no icons are available and no selection is required.

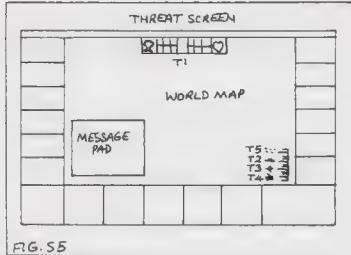


FIG. S5

ATTACK DISPLAY

A Soviet ICBM attack will be displayed on the WORLD screen and will also affect the BORDER DISPLAY.

During normal play, exiting the World screen will "freeze" time and the game calendar will stop. When a Soviet attack occurs, this is no longer the case, and the game will run in a "minutes/seconds" mode regardless of which screen the player selects (except that the attack does "freeze" if you enter the ORBIT screen).

All screens except the R & D screen can be selected as normal. This will enable you to arm the systems if you have not already done so.

The Soviet ICBMs or warheads will appear as dots on the World screen. Any small flashes seen are your systems firing: all your systems coloured yellow in the Orbit Display will fire automatically. The number of Soviet warheads etc. will be shown in the Attack Display. The lower red calendar line will show the time to impact (see Section 4, BORDER DISPLAY).

If the attack looks like penetrating your systems, the President's PHONE icon [C1] will change to a MISSILE icon. This shows that the President is asking you if you can hold off the attack (prevent any warheads falling on America). If you feel that some warheads will get through select the Missile icon (formerly the Phone icon). If you think that your systems will stop the attack, DO NOT select the Missile icon. If you indicate that some warheads will get through, the President will launch the American ICBMs.

These ICBMs cannot all launch within seconds of each other. If you give the President insufficient warning, some or all of the American ICBMs may be caught on the ground. In this case, some or all of the ICBMs may be destroyed.

If an American launch is made, a blue IMPACT BOX will appear on the World screen. This will count the number of nuclear impacts on the Soviet Union. The decision to "approve" a launch or not has a large effect on the player's score.

INQUEST SCREEN

At the end of any nuclear attack or exchange, the game will end and the INQUEST screen will be displayed (see Fig. S6), to assess your performance, and how well America and the SDI systems did. The ATTACK DISPLAY will update and show the following details:

- [A1] - Total number of Soviet ICBMs launched.
- [A2] - Number of Soviet ICBMs destroyed by your systems.
- [A3] - Number of Soviet warheads on the ICBMs at launch.
- [A4] - Number of Soviet warheads destroyed by your systems.
- [A5] - Total number of nuclear impacts on America.
- [A6] - Total of those impacts that fell on urban areas.

The SYSTEM SCORE GRID will show the effectiveness of each of your systems as follows:

- [P1] - Number of ICBMs the system destroyed.
- [P2] - Number of warheads the system destroyed.
- [P3] - Number of system satellites in orbit at the start of the attack (less any losses due to Soviet counter-measures).
- [P4] - Number of system satellites left in orbit.

INQUEST SCREEN		P1	P2	P3	P4
A1	SYSTEMS SCORE CHECK COMPLETE				
A2					
A3					
A4					
A5					
A6					
P6		P7			

FIG. S6

NOTE: In the confusion of battle, different systems will sometimes claim the same "kill". Keep this in mind when comparing system performances. The total number of nuclear impacts on the Soviet Union is shown in the lower impact box [P6]. The player's score is displayed lower centre [P7].

To play a new game, press the fire button and the game restart screen is displayed. Press fire again and you will be returned to the Game Selection screen.

QUIT GAME

To quit the game you must first make sure that the command cursor is "active": this, you must be able to move the command cursor along the command icons. This happens normally when you are selecting different screens. If the command cursor is active, pressing the F key will break out of the game. The screen will clear and a "QUIT OR SAVE?" message will be displayed. Press the Q key and you will "quit" to the GAME SELECTION screen.

GAME SAVE

The game can be saved at any time, before a Soviet attack takes place. The saved position can be reloaded at a later date and the game resumed.

SAVE GAME

Quit the game (see Section 13). The screen will clear and prompt you with "QUIT OR SAVE?". Press S for SAVE.

Cassette: Insert a rewound blank tape into the cassette player, and press RECORD and PLAY on the cassette player.

Disk: Insert a blank, formatted disk into the disk drive label side up.

Now press RETURN and the game will save. After saving, the prompt "QUIT, CONTINUE OR REPEAT?" will be shown. If Q is pressed you will quit to the Game Selection screen. If C is pressed you will return to the game you have just saved. Pressing R will repeat the save process. That is, if you now press RETURN the game will save again. **WARNING:** On the disk version, make sure you have another disk to put a second or subsequent copy of the game position on. The game will not save two copies onto the same disk.

LOAD GAME

Enter the Game Selection screen, either by using the QUIT option if already playing the game, or by loading the game program as normal. Remove the program tape or disk and insert the tape or disk containing the previously saved game position. Select the LOAD action. When the screen prompt appears, press RETURN (and press the PLAY key if using a cassette player). The saved game should now load and then start.

ORBIT SCREEN

There are two methods of entering the ORBIT SCREEN.

METHOD A: If you have some system satellites in orbit during a game, enter this screen by selecting the JOYSTICK icon on the SDI Command screen.

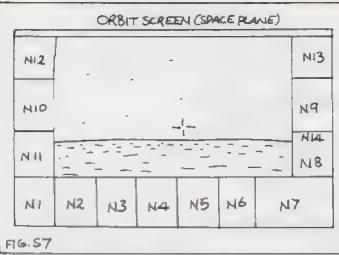


FIG. S7

METHOD B: Select ORBIT when on the Game Selection screen. This enables the player to practice/play the Orbit screen with the game set up in a special way, as follows:

1. Ten satellites of each system are already built and in orbit.
2. All systems are armed.
3. A Soviet attack is taking place.
4. The player starts on the SDI Command screen.

This is a special set-up and a normal game CANNOT be played from this position. When the player exits from the SDI Command screen, the game will restart on the Game Selection screen. Apart from these exceptions, all the subsequent information in this section applies.

Entering the Orbit screen (see Fig. S7) gives you manual control of one satellite of the system you have chosen. In the case of manned systems (ie the Space Plane), it is a view from the cockpit. For all the other systems it is a view of the manual control console at the SDI COMMAND CENTRE on Earth. The central "view" is given by a video camera aboard the satellite in orbit.

To be able to go to the Orbit Screen you must have at least one satellite of the system in orbit. In order to fire any weapons on the satellite, the system must be armed. If the Soviets have not launched an attack, there will be nothing to fire at!

The central view shows the Earth below and stars, targets and so on rising from the horizon. The video image is subject to electronic processing before being displayed, so the Earth and stars are faded and the targets are brightened. Targets can also be detected by their changing positions relative to the stars.

The top right display box [N12] is the type of system for which you have manual control. The boxes below this show the number of missiles [N10] and warheads [N11] you have destroyed so far.

The number below the lightning flash symbol [N13] is the fire power remaining in the main weapon.

Below this are the two displays for the Target Type Computer. This uses radar and data from other satellites to give warning of approaching targets. Large targets are classed as missiles and the number of these targets is shown in the Missile Target Display [N9]. Smaller targets are classed as warheads and their number is shown in the Warhead Target Display [N8].

At the bottom of the screen is a row of command icons. You can select these as normal. All systems have the following command icons and display:

[N1] WORLD

When selected, the player is returned to Earth!

[N2] SLAM

Arms the SLAM missiles, of which there are two on the space plane.

[N3] MAIN WEAPON

Selecting this will arm the satellite's main weapon. Note that the main weapon type will vary according to the system you have selected.

[N4] X-RAY LASER

Arms and launches the X-RAY LASER device. The space plane carries only one of these.

[N5] CAMERA

This causes the Optical Image system to compare the image of the target with patterns stored in its memory. It will display the closest match on the Image Display [N6].

[N7] MESSAGE DISPLAY

Displays messages such as "Weapon Armed".

The space plane is unique in that it also has two other types of weapons in addition to the main armament. The extra command icons are:

WEAPON TYPES AND CONTROL

Each type of weapon has different controls. When a weapon is armed, the Aiming Sight will normally appear on the screen. To exit from controlling the weapon, move the sight to the bottom of the view screen and press the fire button. The joystick will then be back in control of the Command Cursor. The one exception to this system is the X-RAY Laser device, which does not have an aiming sight. Control will automatically return to the command cursor after detonation.

NOTE: The weapon graphics [D11-D14] are shown in Fig. S2 (SDI Command screen).

[D11] LASER

A high-energy pulse laser fitted to the Laser system and the Space Plane system. The Laser Satellite system has energy for 220 "shots" - the Space Plane version has 200 "shots". Aim with the sight and press the fire button to fire. Single target capability.

[D12] RAIL GUN

An electromagnetic rail gun with 250 rounds of ammunition. Aim with the sight and press the fire button to fire. Single target capability.

[D13] SLAM

The Satellite Launched Attack Missile is a solid-fuel missile with an advanced laser tracking system, and is a true fire-and-forget weapon. It is unusual as it can kill its target in two distinct ways

After the SLAM system is armed, it will automatically track your aiming sight. If it can "see" a target in the aiming sight, it will launch and attack the target. Once the SLAM ARMED message is displayed, no further presses of the fire button are needed. Single target capability.

[D14] X-RAY LASER

A multiple X-Ray Laser with a nuclear bomb as its power source! This is a fire-and-forget weapon with a manual override. When you select the weapon, it will arm and launch automatically. Then the yellow X-Ray target count display [N14] will appear, which indicates how many targets the laser is currently "locked" onto. This number will change as the device acquires or loses targets. After a set time, the device will detonate and destroy the targets it is locked onto. If, however, the fire button is pressed again after launch, the device will immediately detonate. This is useful if the weapon has locked on to all targets: that is, the number shown in the Target Count Display equals that in the Warhead Target Display [N8] or Missile Target Display [N9]. Multiple target capability.

NOTE: X-RAY LASER WARNING

The device will detonate automatically at a safe distance from the launch craft. If manual override is used it is possible that the nuclear explosion will destroy the launch craft. If this is an X-Ray Laser armed satellite it doesn't matter, since the launch craft is useless once the device is released. When the launch craft is the Space Plane, it WILL matter!

SDI SYSTEMS (IN THE GAME)

All the SDI systems depicted in the game are being developed, tested or studied, though we admit the SLAM system is a touch more advanced than the proposed one! The system graphics are shown in Fig. S2.

[D11] LASER SYSTEM

This is composed of satellites carrying high-energy lasers. The electric power is provided by [CENSORED] units. During operation, these units produce a ringing sound: giving rise to the system's popular name, "Dead Ringer". Each satellite has a high KC (Kill Capacity) against both missiles and warheads. A complete system will contain 100 satellites.

[D12] ELECTROMAGNETIC RAIL GUN SYSTEM

The satellites are equipped with electromagnetic guns which fire solid "shells" at velocities of over 40 miles per second. Electrical power is taken from explosive charge generators, with vapourising liquid nitrogen used to cool the barrel and feed the ammunition. Each satellite has a low KC against missiles and a normal KC against warheads. The complete system consists of 180 satellites.

[D13] MULTI SLAM SYSTEM

Each satellite of this system carries 64 SLAMs - Satellite Launched Attack Missiles - which incorporate a number of unusual features. The solid fuel motor provides propulsion and generates electrical power, which powers the nose-mounted laser used for target tracking. While fuel remains in the motor, the missile will attempt to kill the target with a direct hit. Once the fuel is exhausted, the remaining energy is expended to overload the laser, firing a final high energy pulse at the target which may destroy it. The system has a high KC against missiles and a low KC against warheads. The complete system contains 250 satellites.

[D14] X-RAY LASER SYSTEM

The satellites of this system each carry one X-ray laser device. The computer on board the satellite tracks all targets, passing targeting information to the X-ray device via an ultra-high speed data link. Under manual control, these transmissions are fed to the operator as sounds, to warn that the device is armed and launched. Each device consists of a small nuclear bomb and bundles of lasing rods. Each lasing rod is allowed to "float" between aluminium rings, and is aimed by varying the electrostatic charges on these rings. When the device is detonated, it is destroyed in a millionth of a second: however, the energy produced causes each rod to transmit an X-ray laser pulse before it is vapourised. Although the pulses last for only a few billionths of a second, they carry energy in excess of a trillion watts! Each satellite has a low KC against missiles and a superb KC against warheads. The complete system contains 60 satellites.

[D15] SPACE PLANE SYSTEM

This system's "satellites" are manned vehicles best described as a cross between a mini shuttle and a fighter aircraft. In the "War Mode" the single pilot has an array of weapons to choose from, including lasers, X-ray lasers and SLAMs. The SLAMs and X-ray devices use the standard piston launch technique, where each weapon is contained in a launch tube. Behind the weapon is a piston, which is moved forward to eject the weapon by vapourising nitrogen to create pressure. In addition, the piston is trapped at the end of the tube and the gas exhausted via a nozzle at the rear of the launch tube: this helps to cancel some of the "launch recoil" which tends to destabilise the launch vehicle. (These pistons are also standard equipment on all SLAM and X-ray systems, and can be noted by their characteristic "hiss" on launching). Each space plane has a low KC against missiles and a normal KC against warheads (this, however, depends on the pilot's ability).

In the "Repair Mode", the space plane can carry a second crew member and other equipment.

[D16] BATTLE MANAGEMENT SYSTEM

This is really a collection of systems which include battle management satellites, computer systems, communication systems and Anti-Ballistic Missile (ABM) systems. The system's KC against both missiles and warheads is poor; however, this is the only system which will attack warheads that have entered the Earth's atmosphere (using the ABMs). The ABMs have a high KC against incoming warheads.

The communication systems are computer-controlled, and messages or commands are very secure from decoding or jamming. This is achieved by various means, one of which is that each message contains a new code to be used for the next message. If the Battle Management system is built, it can be used to control other system. The complete system contains 100 "satellites". This is simply a measure of the system's "completeness" and not, in fact, the number of satellites or ABMs in the system.

TEMPT

To stumble into somebody else's computer system.

To be some-place you're really not supposed to be. And to get the

HAC

strange feeling that it really does matter.

And to get the **HACKER** PLE

strange feeling that it really does matter. "LOGON PLEASE:" is all you

ATION. get to start with. That's it. From there, it's up to you.

If you're clever enough and smart enough, you could

discover a world

HACKER

you've never before experienced on your computer. Very tempting.

on your computer. Very tempting.

CHAMPIONSHIP

BASKETBALL

JOYSTICK NOTES

Amstrad CPC owners may use any CPC compatible joystick.

Interfaces that may be used by Spectrum owners are Kempston, Interface II and cursor compatibles.

CONTROLS

All controls and movements allowed are listed throughout the *Players Guide* as JOYSTICK controls or FUNCTIONS. Players may prefer to use keyboard keys instead for Player 1 whilst Player 2 must always use keyboard. Refer to the table below when playing by keyboard. P1 indicates Player 1, P2 indicates Player 2, and Functions A - C are specific features that may be used.

Keyboard control table for GBA CHAMPIONSHIP BASKETBALL

Player No./Function	Spectrum Key	Amstrad Key
P1-Joystick FORWARD	Q	Q
P1-Joystick BACKWARD	A	A
P1-Joystick LEFT	X	X
P1-Joystick RIGHT	C	C
P1-Joystick BUTTON	Z	Z
Function A	ENTER	ENTER/RETURN
Function B	SPACE BAR	SPACE BAR
Function C	CAPS SHIFT & T SIMULTaneously	ESC
P2-Joystick FORWARD	U	U
P2-Joystick BACKWARD	J	J
P2-Joystick LEFT	O	O
P2-Joystick RIGHT	P	P
P2-Joystick BUTTON	M	M

SELECTING YOUR GAME

Select your game by pressing the SPACE BAR until your required play is highlighted.

PRACTICE SESSIONS

Just as in the real sport, Two-on-Two offers you the chance to warm-up before the game. The scoreboard and the time clock are not active and there are no penalties. Use FUNCTION B key to exit the practice sessions.

HEAD-TO-HEAD (2 PLAYER)

With this option, two players play against each other, but each has a computer teammate to help, dressed in a similar colour jersey.

TEAMMATES (2 PLAYER)

If you choose this option, both players play together as a team, up against a hard-driving computer team.

CHALLENGE (1 PLAYER)

Player 1 pairs with a computer-controlled teammate, and challenges a mighty computer duo. Player 1's team will play as the HOME team.

PASSING

To pass the basketball to your teammate, quickly press and *immediately release* the joystick button.

If your teammate has possession of the basketball, you can request they pass it to you by quickly pressing the button. Your teammate will usually pass the ball, but not always - after all, any player can hog the ball now and then! Your teammate may pass the basketball even if you haven't requested it (unless you are moving) as you are open.

To catch the basketball, you must be directly in line with it, otherwise the ball will go out of bounds, or to the opposition.

SHOOTING

When you have possession of the basketball and want to make a shot, first hold down the joystick button. Your player will jump in the air. Release the button when you want your player to make a shot. Timing here is critical - if you release the ball at the top of the jump, you have a better chance of scoring. If you fail to shoot before your player lands, you'll be charged with *travelling*, an offence in Basketball.

[Hook Shots]

To make a hook shot, you must be downcourt near the baseline, with your back to the basket. With a hook shot, the ball is released as the player's arm "hooks" over his head. The advantage of this shot is that it cannot be blocked.

[Slam Dunks]

Probably the most satisfying shot in Basketball - ramming the ball through the hoop! You must be at the baseline as far downcourt as you can go, and you must shoot when you're in one of three areas: under the basket, half a step left of low post left (LPL) or half a step right of low post right (LPR). Finally, there must be no defenders under the basket. If these conditions are met, a slam dunk will always be successful.

[Tip-Ins]

If a player shoots, misses, and then grabs the rebound while directly facing the basket, he'll try again (a tip-in). As long as the player is facing the basket and underneath it, the tip-in will be automatic once the player jumps.

[Rebounds]

A player can rebound only when he's in the area immediately surrounding the basket. To rebound, press the joystick button in the same way you did to make a shot - your player will jump for the ball. Timing the jump is the key to successful rebounding.

[3 Point Shots]

If a player shoots a basket from outside the white 3-point line, that basket is good for 3 points instead of the usual 2! Timing is again critical, and a basket difficult from this distance.

STEALING & BLOCKING

To steal the ball from an opponent, you must "bump" the player *on the side* on which he's dribbling or holding the ball.

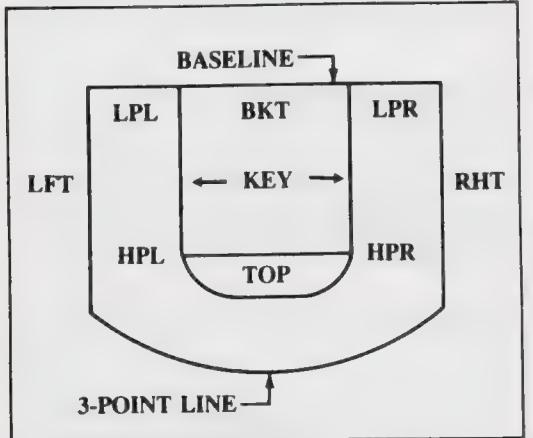
To block a shot, move in close to the player in possession of the basketball and press your button to jump (as if you were shooting). Your success will depend upon your timing and how close you are to the other player.

YOUR COMPUTER-CONTROLLED TEAMMATE

To instruct your computer teammate how to play when play resumes at the other end of the court, use the Playcalling Screen. The scoreboard is replaced for approx. 7 seconds by the Playcalling Screen while the players automatically run down the court and bring the ball back into play. Within this 7 seconds, you must select an offensive and defensive alignment from the Playcalling screen otherwise the computer will choose one for you.

The Playcalling Screen is divided into OFFENSE on the left and DEFENSE on the right. The offense screen shows the abbreviations BKT, RHT, TOP, LFT and SCRН, which represent the five offensive plays you may select now. The Defense screen is similar, showing your options of LZN, HZN, MMD and MML – the four defensive alignments you can choose from.

Select a play by moving your joystick forward, back, left or right depending upon the play you wish to select. For example, forward for BKT or LZN, back for TOP or HZN, right for RHT or MMD and left for LFT or MML. On offense you can also use the joystick button to select the SCRН play.



To pause the game use the **FUNCTION B** key on your keyboard. If you merely want to pause the game, just use the **FUNCTION B** when you're ready to resume play.

You can call a timeout when you're on offense. If you want to call a timeout, first use the **FUNCTION B** key, then press the joystick button. Each team is allowed five timeouts per half. On the scoreboard you'll notice five little yellow lights on the HOME and VISITOR sides of the board. Each time you call a timeout, one of these lights will go out.

To quit a game, press **FUNCTION C** key.

PENALTIES

Fouls and other penalties are displayed upon the scoreboard in flashing letters right after they occur. However, if a player is fouled while shooting, the foul won't be displayed on the scoreboard until after the shot has either gone in for a field goal or missed. Fouling the shooter results in one free throw if the basket is good and two free throws if he misses his shot.

GFL CHAMPIONSHIP FOOTBALL

CONTROLS

All controls and movements allowed are listed throughout the **PLAYER'S GUIDE** as JOYSTICK controls or FUNCTIONS. Amstrad and Spectrum players may prefer to use keyboard keys instead for Players 1 and 2, and these are listed against the equivalent feature below. Refer to this table when playing by keyboard. P1 indicates Player 1, P2 indicates Player 2, and Functions A – D are specific features which may be used.

Keyboard control table for GFL CHAMPIONSHIP FOOTBALL

Player No./Function	Spectrum Key	Amstrad Key	Commodore Key
P1 – Joystick	Q	Q	Joystick
FORWARD			FORWARD
P1 – Joystick	A	A	Joystick
BACKWARD			BACKWARD
P1 – Joystick	Z	Z	Joystick
LEFT	X	X	LEFT
P1 – Joystick	C	C	Joystick
RIGHT			RIGHT
P1 – Joystick	K	CURSOR UP	Joystick
BUTTON			BUTTON
P2 – Joystick	M	CURSOR DOWN	Joystick
FORWARD			FORWARD
P2 – Joystick	B	CURSOR LEFT	Joystick
BACKWARD			BACKWARD
P2 – Joystick	N	CURSOR RIGHT	Joystick
LEFT	L	COPY	RIGHT
P2 – Joystick	F		Joystick
RIGHT			BUTTON
P2 – Joystick	SPACE	/ESC	F3
BUTTON			RUN/STOP
Feedback disable			
Feedback on			
Re-set			

SELECTING YOUR GAME

AMSTRAD USERS NOTE: During game selection press the X key to select.

1 or 2 Player Game

4 and 7 Minute Periods

Drafting a Team

1. Player One begins by selecting the division required (move joystick 1 forward or back to position the football, and press the fire button to register that selection).
2. Player One now selects their team from the chosen division in a similar manner.

3. Player One moves joystick 1 forward or backward to move the football to either the CANCEL or CONTINUE options at the bottom of the screen, and pressing the fire button when the footballs are beside the desired option. If CANCEL is selected, Player One can alter all of the selections already made (and will repeat stages 1-3). If CONTINUE is chosen, all of the selections made will now be registered, and the game will continue.

- [] If a one player game has been selected earlier, Player One now repeats stages 1-3 above using joystick 1 to draft the computer's team, and hence choose the opposition to be played against.
- [] If a two player game has been selected earlier, Player Two now repeats stages 1-3 above but using joystick 2.

GAMESTAR GFL FOOTBALL – RULEBOOK SUMMARY

[] Gamestar GFL Football is played between two teams; in this case either 1 player -v- the computer, or 1 player -v- another player. Just as in the real sport, each team's objective is to score more points than the other team. Points are scored from touchdowns, "extra" points, and field goals.

[] Most of the rules you must follow are identical to those in the sport. For instance, while on offense (attacking), you have **four plays** (or moves) in which you must try to advance 10 yards and get a first **down**. If you fail, you **turn the ball over** to your opponent, who then becomes the team on offense. The computer will automatically referee the game, and switch teams between offense and defense accordingly.

- [] A play is over when your **ball carrier** is successfully **tackled**, runs **out of bounds**, or drops a pass.
- [] You score **6 points** for **touchdown**, **3 points** for a **field goal** and **1** for a point after **touchdown (PAT)**.

[] Other rules apply strictly to *GFL Championship Football*. For example, once your team is set at the line of scrimmage, you can't pass after calling a running play, nor can you run after calling a passing play or run a pass route into the end zone. Similarly, you can't "take" a punt or field goal. Once your team is lined up in a kicking position, you'll have to kick the ball away. You still have plenty of opportunity to outsmart your opponent, however.

- [] The scoreboard displays all of the information you'd find at any American Football stadium.
- [] The scoreboard also contains two **PLAY SELECTION** lists; on the left-hand side are the offensive (attacking) plays, and on the right-hand side are the defensive plays. Each play (name) in each list represents a different specific movement of your team once you are in Game mode, and obviously you must try to use the correct move at the relevant time – selecting a move in this way is known as "Calling a Play".

[] The colour of each play selection list indicates which team is offensive or defensive at that time respectively, and will alter during the game. Player one can call any of the plays listed in blue, player two can call any of the plays shown in red.

- [] To see all of the play choices available to you, push the joystick forward or backward. As you do, the play choices will scroll past. The one in the middle of the list at any time will be highlighted white – you should ensure that your intended play is the highlighted item. In a two player game, you'll both have 30 seconds in Scoreboard mode to select your next play. In a one player game, your time allowed to select a defensive play reduces with each time period, which adds to the difficulty of the game and speeds up play.

- [] When in Game mode, the scoreboard will disappear and you will see the on-field viewpoint of a specific team player, just as if you were that player on the field!

TACTICAL TIPS

Kickoff

The **kicking team** which is controlled by Player Two using joystick 2 (or the computer) are wearing red jerseys. The **receiving team**, controlled by Player One using joystick 1, are wearing blue jerseys and are facing you.

The **kicker** (Player 2) immediately begins his approach to the football and kicks off, with or without assistance from his "coach" (Player 2). Player 2 can help the kicker get maximum distance on the kickoff by pressing the joystick button just as his foot reaches the football.

The Basic Offensive Formation

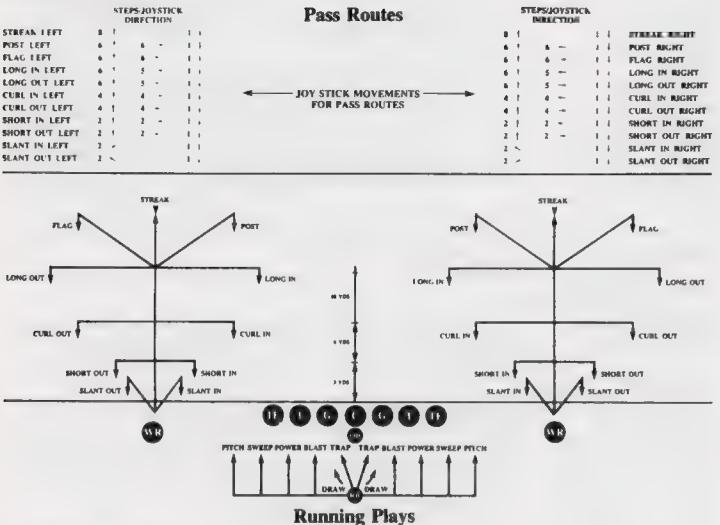


LEGEND:

QB – Quarterback	C – Center
TB – Tailback	G – Guard
WR – Wide Receiver	T – Tackle
TE – Tight End	

- [] Once play begins, you'll be called upon to manoeuvre the TB or one of the WR (depending upon your choice of play) with your joystick. Push the joystick forward to run downfield or left or right to move laterally towards the sidelines. Your TB and WR can't run backwards while eluding defenders, but they do have two other special moves: You can make them faster when they are running laterally and you can have them throw a stiff-arm at a defender.

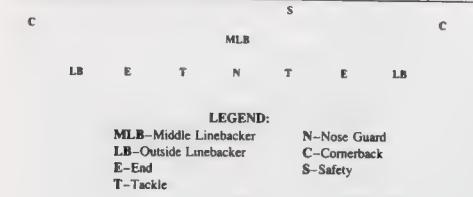
Executing Plays



The Defensive Plays

- Because the computer – not you – controls the movement of all the defensive players once a play begins, it's extremely important that you set up your defense in the right formation before a play begins.

The Basic Defensive Formation



PRODIGY

WARDLOCK CREATES ORGANIC LIFE

The Machine Sorcerer Wardlock has created organic life in his mighty Mechlabs.

Wardlock was kind enough to give us a tour of his Mechlabs which are divided into four zones:

Ice Zone. Vegie Zone. Tech Zone. Fire Zone.

Bouncing around these Zones we saw the results of previous less successful experiments, the eerie Globewels and the less threatening Bloberites, until finally we were shown Wardlock's latest arrivals: Nejo a humanoid baby and Solo the Syntleman, a synthetic humanoid flesh form.

Excerpt from the private diary of Solo the Syntleman:

I do not know how long I have been trapped in this nightmare maze of the Mechlabs but at last another humanoid has arrived to share my incarceration. The new arrival is named Nejo, a baby who follows me about and needs constant supervision; feeding, washing in the showers and protection from the Bloberites and Globewels. Now that I have Nejo I feel an even greater urgency to escape from Wardlock. To this end I have developed a plan to distract Wardlock by feeding spurious data into his terminals and disengaging his security system. I have also discovered that to unlock the doors to the outside world need to collect four Power Keys and place them within the Lockfire.

The Teleport system for travelling between Ice Zone, Vegie Zone, Tech Zone and Fire Zone has started working which may give me the chance I need to get ahead of Wardlock. The Bubblegum I produced is working well so I am now able to keep Wardlock's failed flesh experiments away... Somehow we must get out into space and find other organic life before Wardlock starts experimenting with us...

CHAMPIONSHIP BASEBALL

CONTROLS

Keyboard control table for GBA CHAMPIONSHIP BASEBALL

Player NO./Function	Spectrum Key	Amstrad Key	Commodore Key
P1—Joystick FORWARD	W	W	Joystick FORWARD
P1—Joystick BACKWARD	X	X	Joystick BACK
P1—Joystick LEFT	A	A	Joystick LEFT
P1—Joystick RIGHT	D	D	Joystick RIGHT
P1—Joystick BUTTON	S	S	Joystick BUTTON
Function A	C64 versions only	F1	
Function B	C64 versions only	F3	
Function C	P	P	F5
Function D	P	P	F7
P2—Joystick FORWARD	U		Joystick FORWARD
P2—Joystick BACKWARD	M	5	Joystick BACK
P2—Joystick LEFT	H	T	Joystick LEFT
P2—Joystick RIGHT	K	R	Joystick RIGHT
P2—Joystick BUTTON	J	G	Joystick BUTTON

(To obtain any valid diagonal joystick movements from keyboard, press both above keys together so that the diagonal line lies between)

FREEZE!

- During game play, you can use the FUNCTION C key any time to pause the action. Use FUNCTION D to restart where you left off.

BATTING

- As each hitter comes to the plate, his position, ratings (B for BATTING, C for CATCHING, R for RUNNING and T for THROWING), and hitting style are displayed for several moments on the scoreboard strip at the top of the screen.
- Particularly when you're fielding, it's important to study the hitter's batting and running ratings and his hitting style. This will help you decide how to pitch to him and if he gets on base – how much of a base-stealing threat he is.
- When you're batting, your options are to Bunt or Swing Away.

[The Bunt]

To bunt, press and hold down the joystick button just before the pitcher releases the ball. Release the joystick button before the ball reaches the plate to take the pitch.

[Swing Away]

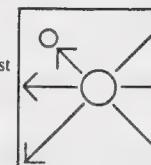
To swing away, press the joystick button after the pitcher releases the ball.

[Running the Bases]

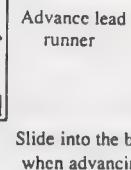
When you put the ball in play, the batter automatically runs toward first base. Once he reaches the bag on first base, however, you control the rest of his baserunning on the play. You can take a lead, retreat back to the bag, start a runner on the pitch, steal bases and slide.

- If there are runners on the base, you control the lead runner, and only the lead runner can steal a base. When the ball is in play, all other runners advance and retreat automatically if forced. As soon as the lead runner scores or is put out, your control shifts immediately to the next lead runner. On a home run, all runners score automatically – you can sit back and savour the moment!

Dive back into the bag when retreating



Slide into the bag when advancing



Advance lead runner

PITCHING AND HOLDING RUNNERS ON BASE

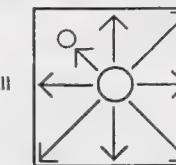
- At the start of each half inning and each time the ball is returned to the pitcher following a play or a pitch, the pitcher bends over and looks for a sign from the catcher. (At the end of each play and when a pitch is swung on and missed, press the joystick button twice to return the ball to the pitcher, then twice more to "set" your pitcher.)

To start your delivery, press and hold down the joystick button – the pitcher moves to an upright position and comes set – then move the joystick to control the type and location of each pitch with your joystick, as shown. (Keyboard players press both keys which the diagonal lies between at the same time).

High and inside knuckleball

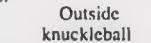
Hard knuckler, inside corner

Screwball, inside corner



Change-up

Slider, outside corner

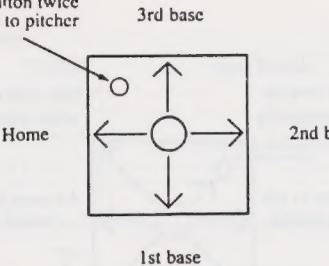


Curve, outside corner

Outside knuckleball

To pick off a runner – or just hold him close to the bag – release the joystick button before moving the joystick to deliver the pitch. You may then throw to any base as shown.

Press button twice
to throw to pitcher



[Fielding and Throwing]

[] When the ball is put in play, the player nearest the path of the ball becomes eligible to field it. If the ball has a shadow, it's a fly ball; otherwise it's a grounder.

To throw the ball, press and release the joystick button, then move the joystick as shown to throw to a base or press the button a second time to throw to the pitcher on the mound.

ENHANCEMENTS TO COMMODORE CASSETTE VERSION

The Commodore 64 cassette has several additional features, detailed below, simply refer to the features after loading and then as necessary.

[DRAFTING A NEW TEAM]

NEW TEAM - you first get a chance to name your team. Type in the name you want from the keyboard (up to 12 letters and spaces) then press RETURN.

[FILLING OUT YOUR LINE-UP CARD]

[] After you finish drafting a new team you must fill out your line-up card.

[] When your BATTING LINE UP screen first appears, the name, position and ratings of your first baseman are displayed at the top of a blank line card. Move the joystick right and left to cycle forward and backward through the players on your roster - your eight starters and three possible starting pitchers.

Move the joystick backward and forward to move the baseballs to the spot in the line up where you want the currently listed player to bat, and press the joystick button to place his name there.

[] Diskette users will then have a chance to choose the divisions they want to play in. In EXHIBITION play you'll be pitted against a randomly selected team from the division you choose. You'll next be prompted to INSERT GAME DISK and PRESS BUTTON TO GO ON. In LEAGUE play you'll then see the division standings. Press the joystick button and the game will begin.

GOING TO THE BENCH (C64 ONLY)

[] Before each half inning (other than the top of the 1st), there is a 5-second delay during which you can elect to make substitutions in your line-up.

[] To make a substitution, player one uses the FUNCTION A key during the delay and player two uses the FUNCTION B key. For each player (player one first), the leadoff man's position in the batting order, name, fielding position and rating appear on the scoreboard. Below them are the name, position and rating of available reserves, only the utility infielder may be substitute for infielders, the utility outfielder for outfielders and the relief pitcher for the starting pitcher. Tap the joystick to the left and right to cycle down and up through the line-up.

Star Raiders II™

PLAYING THE GAME

COMMODORE 64/128

GETTING STARTED

Press the Fire button on the joystick and watch your screen. In a few moments you'll be at the controls of your Fighter, the Liberty Star, looking through the Battle Window onto the planet Teris in the Celos IV Star System. Your Pulse Laser Cannon sights (bracketed) appear in the centre of the Battle Window as a pack of Zylon Fighters swarms in to attack.

Press [P] to pause the game and identify the elements in the game display.

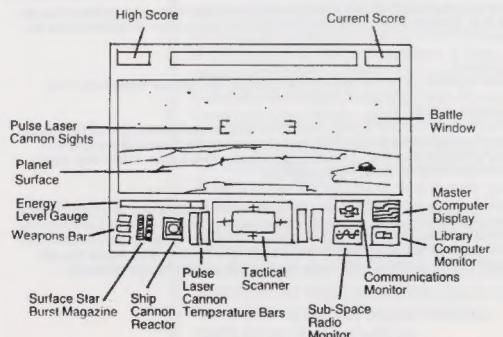
AMSTRAD

Control of the Liberty Star is mostly from joystick and all instructions throughout this booklet refer to joystick movements. You may choose to use the keyboard for control, as follows:

Joystick Control	Equivalent Keyboard Key
Joystick LEFT	N
Joystick RIGHT	M
Joystick FORWARD	A
Joystick BACKWARD	Z
Joystick BUTTON	SPACE

When the program has loaded, you should first select the CONTROL method you wish to use for controlling the Liberty Star. If you press (J) key several times, you will see that the right hand portion of the Message Window will toggle between the joystick and the keyboard. Ensure that the Message Window displays the control method you require before starting your mission.

Next press the (L) key to alter the DIFFICULTY LEVEL (shown on the right hand portion of the Message Window, prior to starting a Mission). Level 1 is the easiest level.



Press [P] to continue the game. You are now computer-locked into orbit above Teris. Fire on the Zylon Fighters as they come into range within your sights by pressing the joystick Fire button. Chase the Fighters by pushing the joystick handle forward to speed up or backward to brake.

Protect the Liberty Star by activating its shields. Press [T] to view the outline of the Liberty Star on your Tactical Scanner. Your shields are activated if a row of dots surrounds the outline. If not, press [S] to activate them.

When your shields are undamaged, you're safe. When you get a message that your shields are damaged, you're in trouble and need to warp to a Space Station for repairs.

Press the [Space Bar]. The System Chart showing the Celos IV Star System appears. Press [P] to pause the game while you examine the elements in the chart.

This System Chart shows the locations of planets and other elements in the Celos IV Star System.

Press the joystick button to continue the game. Move the joystick handle in the direction of another location on the chart, and the hand moves accordingly. When the hand points at a potential destination, a circle appears around it and the Readout Box displays important information about it.

Pressing the Fire Button now will warp you to the new location. You can choose either to warp there or to stay on Teris. Press the [Space Bar] to return to Battle Window action.

Keep checking your Energy Level Gauge and Message Window. When your fuel supply runs low or a Damage Report appears, warp to the nearest Space Station. To do this, press the [Space Bar], point the hand at a Space Station, and press the Fire button on the joystick. At the Space Station, the Liberty Star will automatically dock, refuel, and undergo repairs. When the Energy Level Gauge shows full, warp back to battle.

AMSTRAD

Press the (Return/Enter) key. The System Chart showing Celos IV Star System appears. Press [P] to pause your mission while you study the elements in the chart.

Press (P) to continue the game. Move the joystick handle in the direction of another location on the chart. A Trajectory Line appears to mark your path. When the path reaches a potential destination a circle appears round it and the Readout Box displays important information about it.

Pressing the Fire button now will warp you to the new location. You can choose either to warp there or to stay on Teris. Press the (Return/Enter Key) to return to Battle Window action.

Keep checking your Energy Level Gauge and Message Window. When your fuel supply runs low or a Damage Report appears, warp to the nearest Space Station. Press the (Return/Enter Key) set the Trajectory Line to a Space Station and press the Fire button on the Joystick. At the Space Station, the Liberty Star will automatically dock, refuel and undergo repairs. When the Energy Level Gauge shows full, warp back to battle.

WARPING TO PROCYON

Destroying the Zylon Attack Bases is the key to saving the Federation. Until they're eliminated, those bases build enemy starcraft at breakneck speed.

Penetrate the Zylon stronghold by following the steps below:

1. Press the [Space Bar], point the hand at the Procyon Star System, and press the Fire button on the joystick to warp to enemy territory.
2. You're now in orbit over Morkoth. Ignore the attacking enemy fighters. Press [W] to activate your Surface Star Bursts. An "X" - your target sight - appears on the surface of the planet in your Battle Window.
3. Pull the joystick handle back to slow down. You're on a bombing run! Wait for a city to appear in the distance and manoeuvre your ship towards it.
4. That is your target - a Zylon Attack Base! Fire the Surface Star Burst missiles. Manoeuvre the "X" so it's directly over the base when the missiles hit.
5. Destroy Attack Bases on all three planets of the Procyon Star System. Continue your bombing runs until you use up your SSB's or run low on energy. Immediately warp to a Space Station for refueling and repairs.

HANDLING THE JOYSTICK

The joystick controls the Liberty Star and your weapons systems.

- Pushing the joystick handle to the left or right moves the Liberty Star in that direction.
- Pushing the joystick handle forward or backward speeds up or slows down the Liberty Star when in orbit over a planet. When in space, this motion controls up or down movement.
- Pressing the Fire button on the joystick deploys your weapons or initiates a warp to another location.

KEYBOARDS COMMANDS

[P] Press once to pause, then press the joystick button to resume action.

[W] Press to switch weapons systems.

[T] Press to switch your Tactical Scanner between Target Mode and Weapons Systems Mode.

[S] Press to activate or deactivate shields.

[Space Bar] Press to switch between the Battle Window and System Chart.

AMSTRAD

[Return/Enter] Press to switch between the Battle Window and System Chart.

[ESC] To end a mission.

EXPLORER

Thirty billion light years from the nearest service station and the inertial stabilizers cut out. You make a somewhat cryptic comment about used spaceship dealers.

The warranty falls to the floor in the first shudder of turbulence as you hit the upper atmosphere of the emerald planet you are doomed to die on.

OK, you weren't as lucky as you'd hoped – you didn't die, but now you have a problem. The last planet scan before corruption revealed that the planet consisted of forty billion mappable locations. In nine of them are fragments of your craft.

EXPLORING

To find them, and give yourself a chance of returning to civilisation, you kit yourself out with a jet pack, nine radio beacons, nine anti-grav drones for sending bits of space craft to beacons, object sonar, radio direction finder, a compass, a laser pulse gun, and some heavy jungle boots.

Key Controls

On the ground

Spectrum

Amstrad

6	turn to the left	5
7	turn to the right	8
8	180 degree turn	6
9	move in the direction of your compass bearing	7

In the air

6	west	7
7	east	6
8	south	5
9	north	8

You will soon become aware of strange swirling patches of colour in the jungle. If you get close to one of these it will invite you to enter. Once inside you will be asked for a destination. Name the place of your dreams and it will take you there. Any name will do, there are so many places on the planet.

Another navigational aid, the radio beacons, can be popped down anywhere. Your radio sonar will give you bearing and range on beacons, so you can get down to a bit of constructive triangulation.

CONTROLS

Any joystick will steer you through or over the jungle. On the ground pushing the joystick forward will move you in the direction of your compass bearing. Use the fire button or any key to stop. Pushing the joystick left or right will alter your bearing, while pulling it back puts you into a 180 degree turn.

In weapons mode push the fire button to activate your laser pulse gun.

It takes you up about a thousand feet; press it again and you get another thousand. It takes you down again. Watch landing on the trees; they're pointed. Above the planet the joystick will move you north, south, east and west, regardless of your compass bearing.

MERMAID MADNESS



Pressing break/space brings up a menu on your headup display. Once the menu is up pressing the first letter of any word in the menu will access it. The same is true of the subsequent menus.

Above the planet the joystick will move you north, south...

PLAYING INSTRUCTIONS

You are looking at the Mechlabs from one of Wardlock's monitors. Around the side of the monitor are four Security System indicators (rotating cubes). There are also three indicators along the top of the monitor for Oxygen Supply. Nejo's Food and Nejo's Nappy. These will show you when you need to replenish your oxygen supply, how much milk you have for feeding Nejo and when you need to take Nejo into a shower to clean him up. At the bottom of the screen is a teletype which will type up messages to help you during the game.

To replenish your oxygen supply you must go to the Ice Zone and pop Oxygen Balloons.

To feed Nejo you must find Chef McDonald and use the Bubblegun. To disengage Wardlock's Security System you must collect Security Units and Take them to the Computer Control Centre. You are able to control Solo the Syntelmanns movements.

Nejo will follow you if you do not walk too fast and wait for him to keep up with you. The controls are:

C64 PRODIGY CONTROLS

LEFT	N
RIGHT	M
UP	A
DOWN	Z
FIRE	COMMA/SPACE
PICK UP	F5
DROP	F7
PAUSE	F1

or use a joystick in port two

BIG TROUBLE IN LITTLE CHINA

JOYSTICK CONTROLS

Fire button not pressed	Move Left
	Move right
	Jump
	Duck
Fire button pressed	High attack (unarmed)
	Mid attack (unarmed)
	Low attack (unarmed)
	High attack (armed)
	Mid attack (armed)
	Low attack (armed)

KEYBOARD CONTROLS

Left	I
Right	O
Up	Y
Down	H
Fire	P

SELECTION OF CHARACTERS

Jack Burton	B
Wang Chi	C
Egg Shen	S

The following keys will pause the game:-	
Spectrum	SPACE/BREAK
Amstrad	ESC

Commodore	F1
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To pick up a weapon or eat food you should just walk over the weapon or food.

JACK BURTON, Fist/Bushmaster Combat

WANG CHI, Karate Combat

EGG SHEN, Zap Combat

SCREEN DISPLAY

At the bottom of the screen you are given indicators to show the status of each of the three characters that you may be controlling. Jack Burton is to the left, Wang Chi in the centre and Egg Shen to the right.

The characters stamina is shown by Yin and Yang signs which slowly disappear and may be topped up by eating food that may be found during the game.

If you find and pick up a weapon, i.e. by walking over it with the character who may use the found weapon, then a picture of the weapon will appear at the bottom of the screen to show you are carrying it.

The weapons are represented by:

- Guns for the Gun.
- Swords for the Sword.
- Bottles of potion for the Magic.

Shown above the weapon picture of each of the characters is a bottle of magic potion. This may be found by the characters during the game and will give them added strength.

At the very bottom of the screen your score is given.

PLAYING INSTRUCTIONS

The game is played with three Characters:

1) Jack Burton, the all American hero who is very handy with his "Bushmaster" gun. When controlling Jack Burton the game becomes a "Shoot 'em up".

2) Wang Chi, the martial arts expert who is carrying a sword in which case the game becomes a "Hack 'em up".

3) Egg Shen the Chinese magician who travels on a mystical floating cloud, in which case the game becomes a magical "Zap 'em up".

You may switch between these three characters at any time during the game so that you may choose the best character to deal with each situation. The other two characters will follow the one you are controlling.

DADDY

KEYBOARD CONTROLS

COMMODORE 64/128 CASS/DISC

Player One -

Space – Cast Spell* (1 player mode)
F – Cast Spell* (2 player mode)
R – Trade treasure for energy

Player Two -

G – Cast Spell*
T – Trade treasure for energy

O – Pause game

SPECTRUM

Player One -

Q – Up
A – Down
Z – Left
X – Right
C – Fire
Space – Cast Spell* (1 player mode)
F – Cast Spell* (2 player mode)
R – Trade treasure for energy

Player Two -

P – Up
L – Down
N – Left
M – Right
B – Fire
G – Cast Spell*
T – Trade treasure for energy

O – Pause game

AMSTRAD CPC CASS/DISC

Player One -

6 – Up
5 – Down
R – Left
T – Right
G – Fire

Space – Cast Spell* (1 player mode)
B – Cast Spell* (2 player mode)
V – Trade treasure for energy

Player Two -

↑ – Up
↓ – Down
← – Left

→ – Right
ENTER – Fire
N – Cast Spell*
M – Trade treasure for energy

O – Pause game

* Spells are cast randomly and either disorientate, paralyse or kill.

- * One or two player options
- * Select dungeon; play them in any order you like
- * Trade treasure for energy
- * Joystick or keyboard



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